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EDITORIAL

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"FOR SERVICES RENDERED"

During the last decade the effect of modern scientific development has had a profound ecect upon the existence of the individual. Many previously conceived ideas of living have been discarded; many fallen into disuse. People have become so accustomed to automatic devices in lifts, telephones and other almost human mechanisms, that they accept these services without thought.

However, behind all forms of endeavour, human or otheriwse, there are three main prerequisites: a plan, a means of carrying this plan out, and an operative. In the various activities of the Wireless Institute all three are found. The first two are, of necessity, somewhat abstract; but the latter requires not the ecorts of a machine but that of some person. The Institute is fortunate that within its ranks, it possesses "persons" capable of filling the role of "operatives."

These particular "operative" members may be seen giving of their services in manifold directions; in groups as committees or singly as individuals. They carry out willingly some duty for which they have accepted the responsibility and because of the manner of their acceptance they ask no remuneration of applause. All this, because they believe their fellow members and the Institute will gain by their so doing. The thoroughness with which they apply their energies is a tribute not only to this ideal, but to themselves.

While accepting the benefits of membership in the Wireless Institute of Australia, it should be remembered that the advantages so automatic in function possess a human side. Some one made them exist in the distant past or the recent present. It is not difficult to record appreciation "for services rendered."

FEDERAL EXECUTIVE.

THE CONTENTS

Wideband Audio Phase Shift Networks

PART ONE

BY N. SOUTHWELL,* VK2ZF

WIDEBAND audio phase shift networks came into prominence around 1946, when material concerning them was published in America, and the networks put to various uses, the main one of interest to the Amateur fraternity being s.s.s.c. transmission and reception. Previous to 1946 the properties of these networks were known, but only made use of in a few isolated cases in commercial radio.

Today, some eight years after their sudden leap into prominence in the sphere of Amateur activity, these networks are still regarded by the majority of Amateurs, including some s.s.b. transmitter operators who use them, as magical black boxes, inhabited by a geni, who performs wonders in producing from a single input, two outputs, approximately 90° apart in phase over a wide section of the audio range. Should a fault develop inside one of these "black boxes," however, to produce an undesired phase shift, then heaven help the unfortunates mentioned above, as truly the machine would be master of the man.

A number of Amateurs have shied away from building these units for various reasons, and this article is written after more than three years' activity with phasing type s.s.b. equipment, to help any who may have been interested in these circuits, but due to lack of confidence have not tackled them.

The schematic circuits connected with this article show the various units connected up for use in s.s.s.c. transmitters, the same units with minor modifications are suitable for use in s.s.s.c. receiving equipment; what these are, will be apparent to the boys interested in s.s.s.c. receiving adaptors. This article is lengthy enough, without covering the special refinements required by receiving adaptors.

Phase shift is a characteristic of all equipment, whether r.f. or a.f. It is always present with us, but completely forgotten about by the majority. Many people will discuss the frequency response of audio equipment by the hour, but soon become perplexed when the subject of phase shift crops up, though the performance of audio inverse feed back systems depend on, and are limited largely by, phase shift.

Phase shift is something the ear is quite tolerant about. Two speakers in a public address system can be connected up 180° out of phase and usually only trained personnel will pick the fact, even then, the only effect is a tendency for a "dead spot" in sound coverage to be created in the area between the speakers, where the audio level sounds a little "queer" compared to elsewhere. However, should one of the speakers differ in frequency response to the other, almost anyone coming within range of both speakers will note the fact.

For a wideband audio phase shift unit to be satisfactory, it must meet certain conditions—

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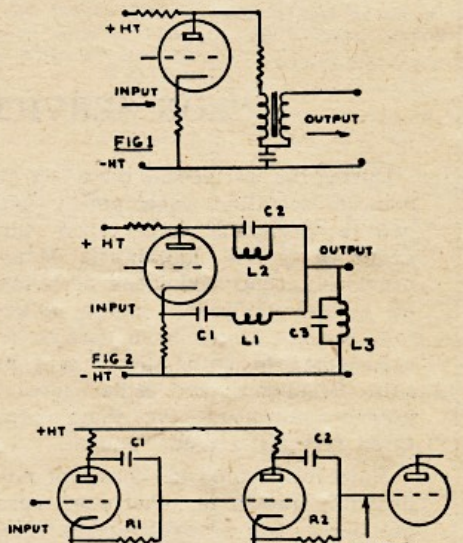
(1) It has to produce from a common input two outputs whose phase difference over the operating range is as close to 90° as possible. (Differential phase shift is the term applied to this phase difference.)

(2) The frequency response of each channel must be similar, though not necessarily flat.

(3) The amplitude variations of the input signal must be faithfully reproduced at the two outputs.

To meet the above conditions, two networks are used, one for each channel. So initially we find that a phase shift unit as used for s.s.b. work comprises two networks, designed as a pair.



Figs. 1 to 4.—Some basic types of Phase Shift Networks.

It so happens when two phase shift networks are combined, one having a design frequency 4.53 times that of the other, the differential phase shift between the two outputs approaches to 90° over a wide range as shown in Fig. 7, where the two curves keep to within ± 4° of 90° over a frequency range of about 27 : 1—quite sufficient for voice frequency work.

It will be seen that the network phase shifts increase almost linearly with the logarithm of the frequency, i.e. over the greater part of their length in the graph the curves are nearly straight lines.

Other networks, as will be shown shortly, have a much wider bandwidth. It all depends upon the design. Do not think that s.s.b. equipment is incapable of high fidelity, if you do, you are badly misinformed. Reverting to the design frequencies, we must assume a geometrical mean frequency for the audio range, as a point from which to commence. The frequency is by no means critical, various authorities quote from less than 700 c.p.s. to over 800 c.p.s., however let us for purposes of any network design covered in this article take 700 c.p.s. as the geometric mean frequency. Then at 700 c.p.s. one network must have a phase shift of 180° + 45° and the other network 180° — 45°.

Due to the conditions enumerated earlier that the networks have to satisfy, lattice type networks are nearly always used in phase shift units.

Figures 1 to 4 show four different types of networks. The ones shown in Figs. 1 and 2 use inductances, and will not be dealt with in detail as the use of inductances in these networks should be avoided if possible, because—

(1) The magnetic fields can cause trouble:
  (a) By interaction,
  (b) By extraneous pick up of 50 c.p.s. fields, etc.
(2) Inductance values vary with the current flow, or with the applied voltage.
(3) All inductances have a certain amount of resistance in their windings.
(4) All inductances have shunt capacity.
(5) The chances of Amateurs being able to obtain the values of inductances called for in the network design are remote, compared to the possibility of their being able to obtain precision resistors and condensers, or build up suitable components, as required by other types of design.

In passing, it may be mentioned that Fig. 2 gives a better performance than Fig. 1. The circuit outlined in Fig. 3 is perhaps the most complex of those to be discussed, it is used in the more elaborate types of equipment, and is capable of high fidelity performance.

Fig. 3 shows two simple resistance capacity networks C1, R1, C2, R2, isolated by tubes, any number of stages can be cascaded to increase the operating bandwidth of the set-up.

The use of two networks each having three stages, with an output coupling stage, as in Fig. 5, will maintain a phase difference close to 90° between their outputs over a frequency range of 200 : 1. The phase difference between the two outputs is usually termed the "differential phase shift."

The input terminals of each section of this type of network, i.e. C1, R1, C2, R2, in Fig. 3, are fed signals 180° out of phase from the plate and cathodes of the preceding tube, which is operated with equal plate and cathode loads. This is one way to get around the necessity of using an input transformer.

No terminating resistor can be used in this type of design, the output must

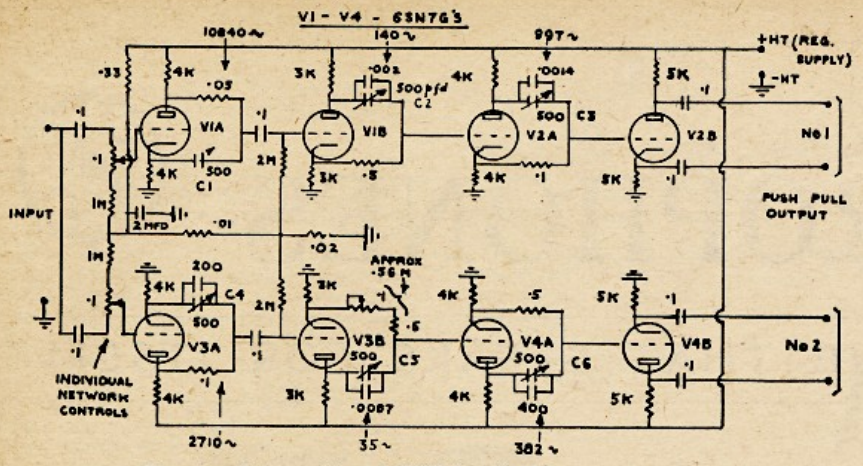


Fig. 5.—Schematic of Wideband Phase Shift Unit.

be fed to the grid of a tube which acts as an output coupling stage, as in Fig. 5 (V2B and V4B).

These networks have an overall loss of around 8 to 10 db. in practice (10 db. is a voltage ratio of about 3 : 1). Another feature of this particular type is that for proper operation, it demands a very low impedance h.t. supply, preferably one that is electronically voltage regulated, or, that has at least 80 to 100 uF. capacity in the output condenser. Due to its comparative complexity, little interest is shown in this type of network by the average s.s.b. operator who is solely concerned with speech transmission. Because of this, no design formulae will be given, but only the adjustment procedure outlined, for one that is shown in detail in Fig. 5.

The plate and cathode load resistors of each stage, twelve in all in this circuit, should be matched in pairs and preferably be within ±2% of the values shown. The input circuit components are not critical, neither are the output coupling condensers.

The six condensers in the sections of the phase shifting networks should each be made up of a fixed mica unit, paralleled by a variable one, to enable their values to be adjusted. Superhet. padder condensers are eminently suitable for this purpose.

To align networks of this type an audio oscillator and a c.r.o. are required. Firstly, check the phase shift of the c.r.o. horizontal and vertical ampilfier channels. For convenience this can be done initially, at all frequencies required for use during the alignment process. A note can be taken of any frequency at which the c.r.o. requires phase correction, and the correction carried out when the alignment has progressed to the point where that frequency is to be used. Frequently it will be found that no correction is required at any frequency, but it should always be checked.

To check the c.r.o. channels for similar phase shift characteristics, connect both horizontal and vertical inputs of the c.r.o. in parallel across the output of the oscillator, which is tuned to the frequency required. Vary the c.r.o. channel gain controls until you obtain a thin straight line sloping at an angle of 45°. This is the indication that both channels have a similar phase shift characteristic at that frequency. Check at all frequencies to be used to see that the same pattern can be obtained on the c.r.o. This should be done with the channel gain controls left set in their original positions as varying the control settings can change the phase shift. At some frequency you may find that instead of getting a thin line sloping at 45°, you see a long narrow elipse. This indicates that phase correction is called for at that frequency.

Firstly, try adjusting the settings of the two channel gain controls, this may clear the trouble; alternatively, you will have to temporarily wire in either a 50,000 ohm pot., or a small condenser, in series with one of the input leads to the c.r.o. Adjust the pot. or change the size of the condenser until the correct display is obtained on the screen. Remember to do this correction on the c.r.o. when you reach the stage in the alignment where that frequency is used.

The above has been gone into in some detail, as it applies in all instances where you use a c.r.o. to check the operation or adjustment of either pairs of components or complete networks.

For convenience in the case of this type of network, the oscillator output signal can be picked off across the cathode load resistors.

ALIGNMENT OPERATION

The sequence of alignment operation is shown in Table One. The alignment pattern that should be obtained when the condensers specified are adjusted, with the c.r.o. connections as tabled, is either a circle or an elipse which has its axes parallel to the sets of deflecting plates. The attainment of the correct c.r.o. display at each alignment position specified, is evidence that at the frequency used, the phase shift introduced by the section of the network whose condenser was adjusted is 45°, the correct amount.

After completing the alignment, check the operation of the whole unit by attaching the c.r.o. amplifier inputs to V2B and V4B cathodes. Swing the oscillator over the operating range and note how the display varies only slightly from either the circular or eliptical pattern specified earlier, from about 70 c.p.s. to over 10 Kc. If a deviation is noticed at some point, it is more likely to be phase shift in the c.r.o. than in the phase shift unit. The line-up procedure may seem involved, but it actually takes little longer to perform than to read how to do it.

R/C NETWORKS

Fig. 4 shows a network using resistors and condensers which, as far as configuration goes, is similar to the L/C network of Fig. 2. This network is one of those commonly used by s.s.b. operators in either transmitters or receiving equipment, and will be covered in detail, including necessary design formulae for lattice type R/C networks, with a worked-out example. Fig. 9 gives the relevant characteristics of series and parallel R/C circuits.

As mentioned earlier in this article, the two networks comprising one phase shift unit are built around the initial assumption of some frequency as a geometric mean of the audio range. Let us assume it is 700 c.p.s. To find the design frequencies for the two networks we use the formula—

Tan phase difference =

$$\frac{2S \times F1 \times Fn \times (F1^2 - Fn^2)}{(F1^2 - Fn^2) - (S \times F1 \times Fn)^2}$$

where phase difference =

$$135° \quad (180° - 45°)$$

F1 = 700 c.p.s. (geometric mean).
Fn = network design frequency.
S (see text) = 4.

Transposing and working out the above, we find that Fn = 2.126 F1.

Step No.	Oscillator Frequency Cycles (Input to Unit)	C.R.O. Connections				
		For Phase Shift Correction Test		For Phase Shift Network Adjustment		
		"X" Amp. input between ground and cathode of	"Y" Amp. input between ground and cathode of	"X" Amp. input between ground and cathode of	"Y" Amp. input between ground and cathode of	Adjust Condensers
1	10,840	V1A	V1A			
2	10,840			V1A	V1B	C1
3	140	V1B	V1B			
4	140			V1B	V2A	C2
5	997	V2A	V2A			
6	997			V2A	V2B	C3
7	2,710	V3A	V3A			
8	2,710			V3A	V3B	C4
9	35	V3B	V3B			
10	35			V3B	V4A	C5
11	382	V4A	V4A			
12	382			V4A	V4B	C6

Table One.—Alignment Chart for Fig. 5.

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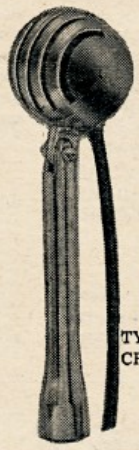

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Then the design frequency for A network = 700 × 2.126 = 1,488 cycles. And the design frequency for B network = 700 ÷ 2.126 = 329 cycles.

It will be noted that these frequencies bear the ratio of 4.53 : 1.

The writer would like to point out now that unless you desire to check the above calculation, it will not have to be performed. You commence your individual designs with the two network design frequencies given, or if you assume a different geometric mean frequency, apply the multiplying and dividing factor of 2.126 to it. The factor S introduced in the above formula merits comment. It is an arbitary factor which should be more than 2. Its optimum value is 4, which is used above. When the value of S lies between 3 and 5, a reasonably good (i.e. straight) graph is obtained when the phase shift is plotted against frequency on a log-linear scale, as in Fig. 7.

The formula for the determination of the phase shift is, phase shift angle—

$$\text{Tan}^{-1}\ \frac{2S \times F1 \times Fn\ (F1^2 - Fn^2)}{(F1^2 - Fn^2) - S^2 \times Fn^2 \times F1^2}$$

(constants are as for previous formula)

DESIGNING THE NETWORK

We now come to the actual formulae used in calculating the network components and find that

R1 C1 = R2 C2 = R3 C3 (refer Fig. 4)

Fn (network design frequency) = $\frac{1}{2\pi R1\ C1}$

$$C1 = \frac{1}{2\pi Fn\ R1}$$

$$C2 = A \times C1$$

$$C3 = \left(\frac{4A^2}{1 - 4A}\right) C1 \qquad A = \frac{1}{S + 2}$$

$$R2 = \frac{R1}{A} \qquad S = \frac{1 - 2A}{A}$$

$$R3 = \left(\frac{1 - 4A}{4A}\right) R2$$

Firstly, we set the value of R1 without any calculation. If the networks are to be driven from the plate and cathode of a tube, as in Fig. 4, select a value of R1 which will be a suitable load for the tube to work into. Values used normally range from 5,000 ohms to 30,000 ohms. Within this range the values of the other components will not become unwieldly. Let us take R1 equals 15,000 ohms.

Now Fn = 1488 cycles

S = 4

$$A = \frac{1}{S + 2}$$

therefore A = 0.1666

R1 = 15,000 ohms.

$$C1 = \frac{1}{2\pi Fn\ R1} = \frac{1}{6.28 \times 1488 \times 15{,}000} = 0.00714 \text{ uF.}$$

$$C2 = A \times C1 = 0.1666 \times 0.00714 = 0.00119 \text{ uF.}$$

$$C3 = \left(\frac{4A^2}{1 - 4A}\right) C1 = \left(\frac{4 \times 0.0277}{1 - 0.664}\right) \times 0.00714 =$$

$0.333 \times 0.00714 = 0.00238$ uF.

$$R2 = \frac{R1}{A} = \frac{15{,}000}{0.1666} = 90{,}036 \text{ ohms.}$$

$$R3 = \left(\frac{1 - 4A}{4A}\right) R2 =$$

$$\left(\frac{1 - 0.666}{0.666}\right) \times 90{,}036 = 45{,}018 \text{ ohms.}$$

That completes the design of the A network.

The design of the B network is similar, as follows:—

Fn = 329 cycles

S = 4

A = 0.1666

R1 = 15,000 ohms.

$$C1 = \frac{1}{2\pi Fn\ R1} = \frac{1}{6.28 \times 329 \times 15{,}000} = 0.0323 \text{ uF.}$$

$$C2 = A \times C1 = 0.1666 \times 0.0323 = 0.00538 \text{ uF.}$$

$$C3 = \left(\frac{4A^2}{1 - 4A}\right) C1 = 0.333 \times 0.0323 = 0.0105 \text{ uF.}$$

R2 and R3 have the same value as in network A, and our network designs are completed. The curves for these networks are shown in Fig. 7. Combining the two networks to form one phase shift unit, we get the set up as shown in Fig. 6. Here the unit is fed from the secondary of a good quality transformer in lieu of being fed directly from a tube.

Transformers with secondary impedances up to 10,000 ohms have been used successfully, but it is recommended that the transformer secondary impedance should be fairly low for the best operation. Class B driver transformers perform admirably in this position.

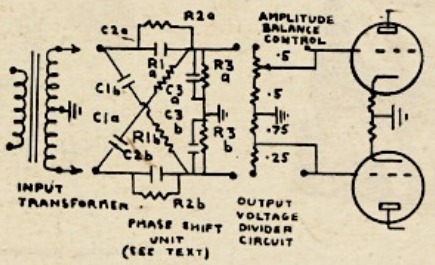

Fig. 6.—Complete circuit of Lattice Type Network.

Note.—See text for component values. "a" and "b" suffixes are used to identify which network the components are part of.

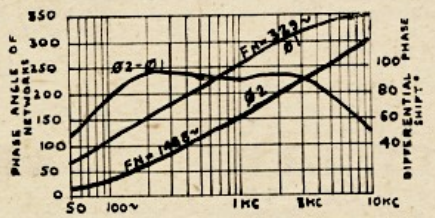

Fig. 7.—Phase Shift Curves for Lattice Type Network in Fig. 6.

Fn is the network design frequency.

The differential phase shift curve shown as "Q2-Q1" should be "Q1-Q2".

The networks have an overall loss which is easily found from the formula:

Output Voltage Eo = $\frac{S - 2}{S + 2}$ × input voltage Ei

For the networks just designed this loss is 10 db. approximately.

Some means of balancing the outputs of the two channels for amplitude is required. This (Fig. 6) is accomplished by means of variable and fixed resistance voltage dividers connected across the outputs of the networks. The total value of the two series resistors in the voltage dividers must be taken into account when you start looking for resistors for the R3 positions in each network, as these are shunted by the voltage dividers.

Referring to the two networks just designed, where R3 = 45,013 ohms. If these networks are used with 1 meg. voltage dividers, as in Fig. 6, the value of R3 will need compensating as follows:

Ra + Rb (voltage divider components) = 1 meg.

R3 original = 0.045 meg.

R3 new = ?

$$\text{R3 original} = \frac{\text{R3 new} \times (\text{Ra} + \text{Rb})}{\text{R3 new} + \text{Ra} + \text{Rb}}$$

$$0.045 = \frac{\text{R3 new} \times 1}{\text{R3 new} + 1}$$

$= 0.955$ R3 new $= 0.045$ meg.

Therefore R3 new = 0.04711 meg. = 47,110 ohms, which is the new value that R3 assumes when paralleled by a 1 meg. voltage divider.

The added loss of this divider, which is 2.5 db., must be added to the loss of 10 db. incurred in the networks. Allow 14 db. as an overall loss (which is a voltage ratio of 5 : 1), when calculating how much gain you need in your audio channel. To test a complete phase shift of this type (lattice R/C), feed tone from an oscillator into it from a push pull source, such as the transformer, or tube, that will be used to drive into the unit. Connect the horizontal and vertical amplifiers of a c.r.o. to the two outputs, having first checked the c.r.o. channels for similar phase shift over the operating range as described. Do not forget to wire in the earth connections to the various parts of the circuit. Running the oscillator over the frequency range the unit covers should result in the appearance of a circle, or horizontal or vertical elipse pattern on the c.r.o. screen. The pattern may change in size over the operating range, but it should hold its correct shape quite closely.

(Continued next month)

Construction of a Cheap Beam

BY TOM ATHEY,* VK4UT

"How's your sky wire?"

"Having any trouble getting those elusive DX contacts?"

One often asks oneself these questions, especially when listening to the proud boasts of the DX man who has just gained his DX C.C. and who delights to tell all and sundry about the mighty beam he built. But does he tell you what it cost? No sir! He earbashes you about his four element rotary on 20 metres, about his getting dural tubing for the elements, how high his pole is, and of his results. Recently I had a letter from a chap who decided to build one, but could not obtain his quota of dural, and could I help him to get it? I told him that I was out of touch with the local market and suggested he get in touch with the "beam" boys in the south.

Now there is no need for these elaborate structures to make a worthwhile beam, although I will admit that if you can get the material to build one of the "super-duper" type, go to it by all means. They do pay off. But they will cost you quite a bit, probably more than the average Amateur can afford, that is without robbing the kid's piggybank, or docking the XYL's pay cheque (which is not conducive to the best of harmony).

So this article is the direct result of such enquiries.

Some time during the past year it befell my lot to do a relief stretch at one of the N.B.S. (Qld.) transmission stations where one of Amateur Radio's consistent phone and key men is stationed and from where he daily logs S9 reports from the world over. To wit, VK4EL—Eric to the fraternity. Yet his aerial is only an 8JK and he swears by it. Both from results (and I can vouch for that, having seen his cards) and from the cost angle. We discussed the possibility of improving the beam, by trying to make it rotate.

I think that here it is time to state just what it consists of. The aerial, as shown in detail in most copies of the A.R.R.L. Handbook, is an end-fire horizontal beam, but is of fixed direction in the orbit of its lobes. To work more than two directions other than at right angles to its plane, one has to build additional antennae. Thus to be able to make it rotate would be a decided asset.

The point was how? The element length was 36 feet end to end and the elements were 8 ft. 9 in. apart. We started to plan it, but circumstances over which we humble technicians have no control, took over and the project had to be shelved, owing to my having been transferred again.

My next location was at Atherton in Nth. Queensland, where again luck was with with me, to wit, being stationed with VK4UX, another chap who gets results without the elaborate gear. In fact Claude has had excellent reports when he tried out a piece of wet string, properly matched, of course! Any doubters? Call up Claude some night and he'll give you the gen. So chaps before you decide on that super beam, I hope that this article may give you something to think over.

And now, as our old friend Samuel Peypes says, so to work. What we want is a lightweight boom, about 40 ft. long, yet strong enough to resist a reasonable wind force, and one that will cost little.

At first this seemed impossible. Then what passes for a brain, got an idea. I saw some kiddies playing with bows and arrows. Why not use the bow idea for the boom? Also, if the boom was of a "laminated" structure, strength and lightness could be incorporated together. Another fact was that timber, say, 2 x ½ inch bends easily one way (on the flat), but resists any bending on its edge. Try it. Here was the solution to the boom. All that was left to consider was the carriage or cradle as I call it. This could be made from light timber too, namely 1 x 1 inch pine. Thus with a few light pieces of timber, a few bolts and screws, brass for preference, it was possible to rotate an 8JK antenna. For elements, ordinary 3/20 bare earth wire was quite in order. And the results? A beam that will give a gain of over 4 db over a dipole.

Another point was the rotating system. As the beam has only to be rotated 180 degrees to gain 360 degrees coverage, due to the fact that the antenna is of the bi-directional type, no elaborate system of rotation was required. The cheapest system is, of course, to use a piece of rope wrapped round the rotating pole. Other means suggest themselves, but I leave that to the individual Amateur to make, knowing that the method selected will be from the direct results of his training.

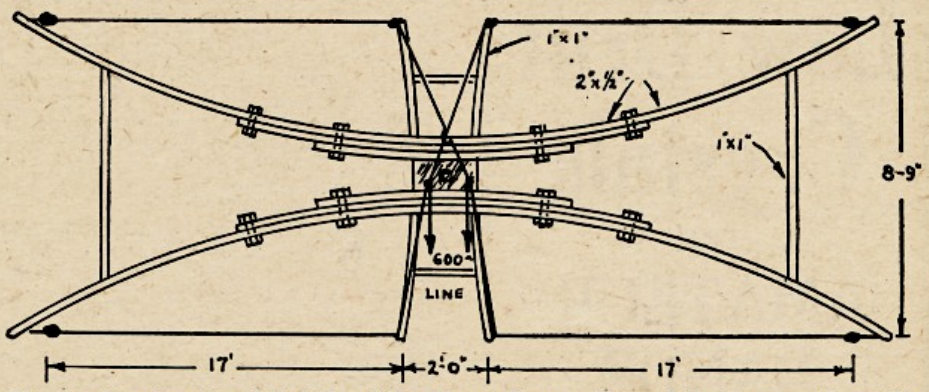

Fig. 1.—Constructional Details of the Cheap Beam. Plan of the bows and cradle.

CONSTRUCTION

First one has to get some timber. I know it's quite a job these days, but it can be done. If you decide to build up this beam you will need the following supplies:—

Support pole, hardwood, 4 x 4 in., 20 to 25 feet long.
Cradle, dressed pine, 1 x 1 in., two 9 fts., two 1 ft. 6in.
Cradle block, dressed pine, 6 x 2 in. 1 ft. long.
Boom (bows), dressed pine, 2 x ½ in., six 20 ft. pieces, two 10 ft. pieces.
Boom braces, dressed pine, 1 x 1 in. two 8 ft. pieces.
One length of g.i. pipe, 1½ in. diam.
One pipe flange, 1½ in. female thread.
Plastic paint. Sundry nuts and bolts, screws, insulators, etc.
Two only brass nuts and bolts about 10 in. long.

A couple of other eye bolts are necessary and these will be introduced when they are to be used. **Warning, paint all your work with the plastic paint. It improves insulation and protects your wood and iron pipe.**

Now commence building it. Take two of the long pieces of 2 x ½ in. pine and place them end to end. (Sounds like a recipe for a stew.) Give yourself plenty of room as it will stretch some 40 feet. Now place another 20 ft. piece over them in such a way that it covers the other two pieces equally, and bolt together. Now place one of the 10 ft. pieces again over it and again bolt together (see sketch). Forget about

(Continued on Page 9)

* 41 Mountford Road, New Farm, Queensland.

Have You Ever Gone Portable?

BY "PANSY" VK5PS

When I decided to take away a portable set-up on my recent holidays, the news of this was received with a certain amount of coldness among the members of my family. My married daughter appeared to take a decided dim view of my plan and said, "You don't want to take away a portable radio on your holidays, you will be wanting to take long walks in the moonlight with Mum," concluding this statement by closing one eye and saying "Woo Woo!" I treated this "woo woo" business with the necessary coldness and refused to be shifted from my intention.

To make a short story longer, we eventually arrived at our camping ground and it was my intention to go right ahead with the setting up of the antenna, but catching the look in my XYL's eye, I decided that possibly it would be better to set an example to my son-in-law, Bob, and fix up the caravan and "what have you" first. Eventually all the chores were completed, and Bob and myself, looking not unlike a couple of Girl Guides, set out to find a suitable tree for the antenna. This was not hard to find and with Bob all set to show me how the Air Force tied stones to their aerials and tossed them up into the trees, I stood back and gave him his head.

With a mighty heave and an audible grunt, he tossed the stone high in the air; up, up, into the tree. By the time we had calmed the ruffled feelings of the man who owned the caravan next door, and promised to pay for the broken window, it was getting on the late evening side, so I set Bob to work chopping some wood and completed the outside installation myself, it worked out much cheaper!

All was now ready, and at this point I lost my confidence. Supposing that I did not get a contact, suppose that I was set up in a dead spot, suppose that all stations had retired to their evening meal. I broke out in a cold sweat at the thought, but with my XYL, my daughter, and to say nothing of Bob, sitting alongside the portable set-up looking like the avenging angels or something, there was nothing I could do but call CQ. Whilst I was calling CQ, in a decidedly weak voice, I was thinking up the necessary alibi and how best to put it over. Glancing at the three avenging angels, I realised that I would have to end my CQ some time or other and in abject misery I crossed over to the receiver and waited in fear and self-pity for the deep silence that I felt sure would follow.

WHAM! BANG! WHACKO! You should have heard the din calling me, there must have been twenty stations at least, VK5s, VK3s and even VK4s, believe it or not, the entire 80 metre band was alive with my call sign. VK5PS/Portable simply filled the air. How I kept my bottom jaw from hitting the floor from sheer surprise I will never know. My XYL was looking at me with a look of stunned surprise, my daughter was for once bereft of words, and Bob was looking at me with a look that distinctly said, "He's not such a dill as I thought he was!"

With a calmness that surprised even me, I said, "I will work a few of these jokers and then perhaps we will have some tea," and the avenging angels fairly hung on my words, as I exchanged numbers with all those that called me.

Yes, you have guessed it, I had run slap bang into the National Field Day Contest, and because I had been out of town for three weeks I had not seen the magazine and did not know that the new date had been arranged. I meant ten points to all stations and they did not intend to let me go. The avenging angels did not wake up to this, and my hour of triumph had arrived.

At this point my simple little story should end with everybody living happily ever after, and if I had not been carried away with my success, that is exactly what would have happened. My dreams of breakfast in bed each Sunday morning, brought in by the loving hands of my XYL, forever converted to the fact that she had married a real Radio Amateur, were rudely shattered by my XYL saying, "See if you can contact that station at the top of the band, that one with the sweet voice." I listened for the call of the station with the sweet voice, and noted with something of apprehension that it signed VK3RN. My XYL said again, "See if you can contact him, he seems like a sweet boy." Turning to her with the semblance of a snear on my face, I said, "Oh that is Ron, he is not a bad chap, aside from having two heads and six fingers on each hand, he isn't too bad."

Even at this point I could have saved myself, but no, I was drunk with success, and without giving a thought to the inevitable I called him. A feeling of disaster hit me as he came back and called me. It wasn't the voice of Ron, although it was familiar. I clutched the table in suspense, and all of a sudden it hit me with the force of an atom bomb, it was **Pincott** (my enemy), of all the stations in VK that I could have contacted I had to contact him!!

Shall we draw a veil over what followed? In three minutes he brought me down from the heights to the depths, he told the avenging angels how weak my signals really were, he told them that but for being a contest I would not have had a contact, he told them everything that he could think of, including that it was only the ten points that made me such an attraction.

As I switched off the Type 3 and looked into the faces of the avenging angels, I realised that my brief hour of triumph had vanished into thin air, and as my XYL handed me a paper plate and a piece of dry bread, at the same time opening the caravan door, I walked slowly out into the night. Higher up on the hill, a mob of campers were singing in sad voices, "Poor old Joe," and I softly said to myself, "What has Joe got that I haven't."

As I slowly walked along looking for a suitable dog house into which to crawl, I noticed up in the tree above me, an owl, who apparently took pity on me because he slowly closed one eye and said, "Woo Woo!" The stone that I threw at him made no effect and as it fell into the river with a splash even the disturbed frogs seemed to be saying **"Pincott, Pincott, Pincott." Wouldn't it!!!**

CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

CHEAP BEAM

(Continued from Page 7)

bending the bow yet. Just put it aside and repeat the dose. This will give you two "bows." Leave them as is, and proceed to make the cradle.

For this you will need the 6 x 2 in. piece of pine. Lay the block lengthwise and mark the bolt holes (see Fig. 2a). Having painted it, follow Fig. 2a and mount the bows. Use large washers under the bolt heads and nuts so that they will not pull through. Now turn the assembly over and screw on the 1 x 1 in. pine cradle bars (see Fig. 2b). Now stretch open the cradle ends, as Fig. 1, to give an opening exactly 24 inches apart at each end of the cradle and fix the cradle braces in place. Attach four bobbin insulators, one to each piece of the cradle, at each extremity, in such a way that wire can be used to strain on.

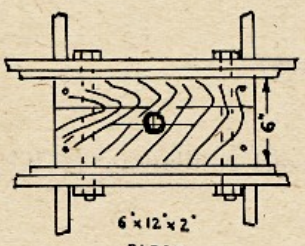

Fig. 2a.—Plan of Cradle Details.

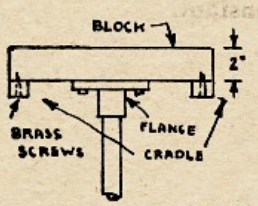

Fig. 2b.—Block Details.

Now cut four lengths of 3/20 bare copper wire about 20 feet long and attach one to each insulator. Next cut four lengths of wire to use as strainers for the elements. Drill two holes at each end of the bows and thread wire through and secure in usual way. Now measure exactly 17 feet from the cradle insulators and insert an egg insulator in each wire element. Next feed the smaller wires (strainers) through the egg insulators and draw tight. This will form the bows. Keep drawing them tight until the elements are parallel. See Fig. 1.

Attach two more bobbin insulators to the underside of the block and arrange the cross over wires as shown in Fig. 1. This completes the construction of the boom and cradle.

Next choose the site for the support pole and erect it in position. It is best to put in the eye bolt that will act as the guide hole for the waterpipe. Don't place it too low as you have to pass the waterpipe up through it when the pole is up. When the pole is in place, push the water pipe up through the eye bolt and mark where the lower eye bolt is to go. Withdraw the pipe and mount the lower eye bolt. Next get a piece of round hardwood about 1½ in. diam. and insert it in one end of the pipe. Make sure that bit is a tight fit. Now point the other end of the wooden peg. Do not make it too acute. Then replace the pipe back in the eye bolt (upper) and sit it on the lower eye bolt.

Notice that you will require different size eye bolts for top and bottom. The next step is to attach the flange. Climb up the pole. It's not hard, as any extension ladder will reach up to the top usually. Screw the flange in place tightly and paint the joint. Now hoist the boom and cradle up. As this is of light construction, this should not present too much difficulty even though it is a fair length. A point here is that you should have marked and drilled the flange holes in the block prior to hoisting the boom up. Sit the boom over the flange holes and bolt securely. If the face of the flange is restricted and small a metal plate should be placed between the block and the flange. A piece of stove iron about ⅛ to a ¼ in. thick will be good here, thus giving more stable support to the boom. Now all that is left to do to make the darn thing work is to attach the feeders.

FEEDERS

This type of antenna requires a 600 ohm line feed. Open wire line is undoubtedly the best to use, and to the average Amateur should not present too much difficulty in construction. Details of 600 ohm line data will be found in most A.R.R.L. Handbooks, so depending on the wire on hand you can make up one to fill the bill. A point to remember is that feeders should have no sharp bends between the point of attachment to the antenna and the aerial tuning unit.

I think I have covered the salient points of this method of building a cheap beam chaps. So I'll leave the rest to you to try it out. It will not cost you much to build and should improve your signals to the f.b. signal range. This aerial, being cut for fundamental on 20 metres, will also work on 15 and 10 metres without alteration except tuning the antenna tuning unit.

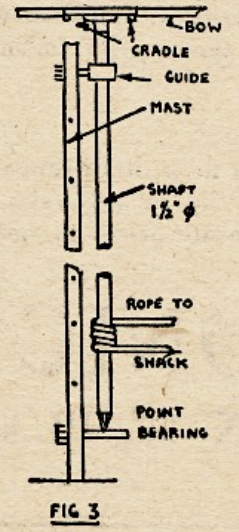

Fig. 3. Method of Support.

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NEW AWARDS MANAGER

Will members please note that the address of the new Awards and DX C.C. Manager, Mr. Gordon Weynton, VK3XU, is 30 Park Street, Brunswick, N.10, Melbourne, Victoria. All correspondence regarding Awards, etc., should be sent to the above.

AUSTRALIAN V.H.F. RECORDS

TWO-WAY WORK

Band Mc.	Stations	Date	Miles	World Rec'd
50	VK5KL-W7ACS/KH6	26/8/47	5355	10500
,,	VK6HK-VR2CG	3/1/55	3928	,,
,,	VK6WG-VR2CG	3/1/55	3816	,,
,,	VK3IM-VR2CB	30/12/53	2405	,,
,,	VK7BQ-VK9DB	—	2211	,,
,,	VK7LZ-VK9DB	—	2211	,,
144	VK3GM/3-VK7LZ/PF	9/3/52	317	1400
288	VK3AFJ/3-VK3AAF/3	21/3/54	63.8	—
576	VK3ANW-VK3AKE	11/12/49	81.6	—
1215				100
2300	VK3ANW-VK3XA	18/2/50	9.1	150
5650				—
10000				109
21000				800 ft.
30000				—

It is in the interests of all v.h.f. enthusiasts to notify F.E. through Divisions of your own v.h.f. records. Please give exact details of both stations' locations for checking, when submitting your records.

1954 VK-ZL DX Contest Results

REPRINTED FROM "BREAK-IN" APRIL, 1955

AUSTRALIA

C.W.—

Call	Total	40	20	15
VK2GW	2807	1197	1348	262
VK9AU	1472	44	1369	59
VK2AHH	1427	—	1427	—
VK3XK	1233	664	495	74
VK2QL*	1052	564	404	—
VK4SS	1040	—	1040	—
VK5KU	1006	466	540	—
VK2YB	816	352	464	—
VK3YD	810	810	—	—
VK3ANJ	680	537	143	—
VK3XB	628	628	—	—
VK7LJ	525	397	128	—
VK6LJ	334	—	334	—
VK2AFA	279	—	279	—
VK5RX	245	—	245	—
VK3AHH*	220	104	—	—
VK3RJ	210	15	195	—
VK7RT	148	—	148	—
VK5WO	60	—	60	—
VK2AKV	30	—	30	—

* VK2QL's total includes 84 pts. on 80 metres; likewise VK3AHH's total includes 116 pts. on 80 metres.

PHONE—

Call	Total	40	20	15
VK5MS	1672	—	1672	—
VK4KS	1407	214	1236	—
VK4SF	1317	183	1003	131
VK9DB	973	—	753	220
VK2AHH	836	—	836	—
VK5XN	606	—	606	—
VK5LC	533	—	533	—
VK5CE	427	—	427	—
VK2AKV	410	—	410	—
VK5WO	303	—	288	15
VK4ZP	283	—	163	120
VK9SP	215	—	215	—
VK3XK	177	—	162	15

LISTENERS—

Geoff Morris, 639 points.
D. H. Rankin, 295 points.
M. Ide, 54 points.
M. F. Taylor, Check.

NEW ZEALAND

C.W.—

Call	Total	40	20	15
ZL1AH	3134	1009	1624	501
ZL2GS	2122	827	883	412
ZL3JA	2106	867	920	319
ZL1MQ	1520	468	957	295
ZL4CK	995	565	430	—
ZL2GX	163	—	163	—

Check Logs: ZL1HY, ZL2ADS, ZL2IQ, and ZL3GQ.

PHONE—

Call	Total	40	20	15
ZL1MQ	899	116	543	240
ZL3NH	737	—	737	—
ZL2GX	457	—	457	—
ZL4JA	319	169	150	—

LISTENERS—

R. W. Gray, ZL304, 1122 points.
B. Robertson, ZL232, 340 points.

OVERSEAS

C.W.—

	Points		Points
CR7LU	4	PY5TH	1
DL1ED	588	SM5LL	260
DL1KB	416	SM7AVA	240
DL2BC	300	SM4BEC	208
DL1QT	170	SM3AKW	189
DL2RO	144	SM5AQV	162
DL3OC	99	SM5AQW	140
DL6DF	70	SM3AKM	136
DM2ACM	42	SM5VK	60
DL1YA	4	SM3AEQ	50
EA3CY	30	SM3BIZ	4
EA3IH	1	SM6AJN	1
FK8AE	253	VE7ALE	252
FK8AC	108	VP4LW	2
G5RI	403	VQ4EG	198
GI4RY	60	W8JIN	2240
HA5KBA	216	W6MVQ	1786
HB9MU	98	W6LDD	1694
HB9MO	35	W6MUR	1200
HR1AT	176	W5HVR	884
JA1CJ	1416	W6GPB	612
JA3BB	627	W6ATO	574
JA1AQ	484	W4KVX	546
JA8AQ	363	W8KIA	441
JA1AS	280	W2WZ	396
JA7AD	90	W9ABA	363
JA4AF	56	W7PQE	351
JA1FA	4	W4HQN	324
KL7BBV	60	W3VKD	280
KZ5GH	160	W0RSL	264
LU6DJX	410	W1RWP	70
LU7AS	102	W5GSR	65
LZ1KAB	108	W6ID	63
OE1ER	144	W5OLG	28
OH2MQ	55	W0LLU	24
OH3SR	9	W6EJA	21
OH3RA	8	W6NJU	18
OH2LA	1	W9FYM	16
ON4TQ	135	W0VFM	16
ON4CK	54	W6WSS	15
ON4PA	35	W8HHR	12
OZ7BG	28	W1YYM	8
PA0VB	72	W9UKG	8
PA0TAU	63	W1ZMB	6
PA0ZL	18	W2NHH	1
PA0FB	9	XE1PJ	1
PA0HP	1	YV5AE	168
PA0RC	1	YV5DE	9
PJ2AN	135	4S7LB	66
PY7AB	39	Multiple Ops.:	
PY4IE	36	K6AAJ	1140
PY2BNX	4		

PHONE—

	Points		Points
EA3GF	1	OZ7BG	2
F9RM	8	PA0NU	66
HA5KBA	1	PA0ULA	4
HK3PC	720	PI1J	78
I1TDJ	45	SM5LL	12
JA3BB	315	VE5RU	1
JA4AF	256	VS2EB	700
JA1CJ	200	VS2DQ	682
JA2XE	78	TI2GC	324
JA2WB	75	VU2RC	1
JA1FA	4	W6YY	405
JA1GV	4	W8JIN	110
KH6BAK	350	ZS5AW	150
KZ5GH	66	ZS1PM	20
LA5YE	6	ZS6AJW	2
OH2OV	90	4S7GV	32

Club Competition:
Northern California DX Club—1st.

LISTENERS—

U.S.A.—Ben Adams.
Bulgaria—LZ3865.
Switzerland—HE9RDX.

WATCH OUT FOR THE—

Australian Radio Amateur CALL BOOK

Will be published towards end of June.

AMATEUR CALL SIGNS

FOR MONTHS OF FEBRUARY AND MARCH, 1955

NEW CALL SIGNS

VK—

New South WALES

2EZ—W. G. Spencer, Station: "Caroline," Gannon's Rd., Dolan's Bay; Postal: 17a Stanley Ave., Mosman.
2JS—T. M. S. Spence, 63 Breimba St., Grafton.
2ZA—A. A. B. Slight, 31 Lamrock Ave., Bondi Beach.
2ACZ—D. J. Allen, C/o. S.M.H.E.A., Island Bend, via Cooma.
2ATU—E. M. Cragg, Portable, 86 Hawthorn Ave., Chatswood.
2ZAD—B. Holland, 9 Downshire Pde., Chester Hill.
2ZAN—K. N. North, 18 Gladstone St., Bathurst.
2ZAY—N. I. Bruce, Lot 25, Woronora Cres., Como.
2ZBF—F. W. Fowler, 4 Thompson Cres., Tamworth.
2ZBH—W. O. Hill, 15 Morgan St., Petersham.
2ZBJ—W. B. Jones, C/o. Griffith Producers Co-op. Pty. Ltd., Griffith.
2ZBM—H. O. Matthews, 196 View St., Annandale.

Victoria

3BD—R. C. Krummel, 4 Ward St., West Preston, N.18.
3AAV—A. I. Dunnicliff, 1 Bellbrook St., East Newborough.
3ADE—B. P. Everett, 95 Victoria St., Warragul.
3AJK—J. Spark, 20 Marshall Ave., Moe.
3ALR—G. L. H. Hipwell, 17 Princes Ter., St. Kilda Rd., Melbourne, S.C.2.
3AQN—F. E. Naylor, 116 Finch St., East Malvern.
3ZAP—K. J. Love, 27 Bishop St., Oakleigh, S.E.12.
3ZAT—N. A. Town, Leith Road, Montrose.
3ZAU—H. S. Lilburn, 21 Albert St., Mitcham.
3ZBB—A. J. Bowman, 476 Nepean Highway, Frankston.
3ZBD—W. I. Dawson, 14 Tait St., Footscray, W.11.
3ZBE—A. F. Elliott, 31 Fenton St., Ascot Vale, W.2.
3ZBM—M. J. Murnane, 146 Blyth St., Brunswick.
3ZBR—J. R. Barber, Carr's Lane, Anakie.
3ZBT—C. Taylor, 4 Austin Ave., Elwood, S.3.

Queensland

4BM—W. J. Mead, New Cleveland Rd., Gundale, Brisbane.
4TX—E. J. Leather, Jefferson Lane, Palm Beach.
4ZAL—G. L. Lang, Station: Horseman Rd., Warwick; Postal: C/o. Warwick Broadcasting Co. Pty. Ltd., Warwick.

South Australia

5EE—E. T. Walter, 216 Prospect Rd., Prospect.
5HJ—H. J. Champion, C/o. D.C.A., Parafield.
5MM—M. M. Harding, 121 Collins St., Broadview Gardens.

Western Australia

6BE—J. R. Elms, 131 Shepperton Rd., Victoria Park.

Tasmania

7AC—D. G. Cartwright, 38 Mary St., Launceston.

Territories

1AWI—W. H. Oldham, Mawson, Antarctica.

CHANGES OF ADDRESS

VK—

New South Wales

2LP—L. N. Page, 20 Douglas St., St. Ives.
2NI—A. H. Nicholls, 53 Osborne St., Manly.
2RS—D. C. Haberecht, 605 Abercorn St., South Albury.
2UQ—P. J. Hanley, 88 Parramatta Rd., Camperdown.
2AAD—R. Hodgins, Station: Vessel "Teralba"; Postal: Ross St., Glenbrook, Blue Mts.
2AAF—A. Fisher, 38 Carter's Lane, Fairy Meadow, Wollongong.
2AAN—M. Butler, 83 Chester St., Epping.
2AEP—A. J. McGuigan, 28 Walker St., Lismore.
2AHK—A. E. Clark, C/o. Mrs. McGuigan, 28 Fawcett St., Kyogle.
2AHT—J. E. Thompson, 34 Renwick St., Toronto.
2ALJ—N. G. Beard, 4 De Chair Rd., Brookvale.
2ALO—A. B. Clark, 35 Moxon Rd., Punch Bowl.
2AOM—A. N. Murdoch, Kingsgate Flats, Bourke St., Taylor Square, Sydney.
2ASO—A. R. Simpson, 79a Carter St., Cammeray.
2AUH—F. Hinks, 24 Johnson St., Lambton, 2N.
2AUR—G. V. Randall, 39 Beuna Vista Ave., Denistone.
2AVG—E. G. V. Gabriel, 48 William St., Port Macquarie.
2AXD—E. A. Druitt, Alagala St., Narromine.

Victoria

3BK—S. C. Baker, 40 Bondi Rd., Bonbeach.
3FS—A. J. O'Brien, Old Eltham Rd., Lower Plenty.
3HD—H. D. Ward, 28 Stockdale Ave., Clayton.
3HY—H. L. Andrews, 265 Gray St., Hamilton.
3MG—K. W. Jane, 8 Orrong Cres., Camberwell, E.6.
3OY—W. D. Iliffe, 30 Warrigal Rd., Mentone.
3QF—R. Rowley, Silas Ave., East Frankston.
3XP—R. E. Sankey, Colchester Rd., Bayswater.
3YK—G. C. Douglas, 7 Wentworth Ave., Canterbury, E.7
3YM—S. A. Thompson, Lot 126, Afton St., West Essendon.
3ZB—T. G. Roper, 3 Queen St., Surrey Hills.
3AAF—H. H. Smith, 17 Duncan St., Box Hill.
3ADD—H. L. Daniell, 11 Killara Ave., Hartwell.
3ANL—E. L. Blackmore, Dundas Rd., Maryborough.
3AQF—J. R. Fryer, 22 Grant St., North Fitzroy.
3ARU—A. N. Jones, 205 Burnbank St., Wendouree, Ballarat.
3AZO—J. A. Cunliffe, 21 Highview Rd., East Preston, N.18.
3ZAH—R. L. Haymes, Lot 12, Latham St., East Bentleigh.

Queensland

4UX—C. P. Singleton, 47 Herberton Rd., Atherton.
4ZX—A. F. W. Bullock, 31 Greens Rd., Camp Hill, Brisbane.

South Australia

5AL—K. S. Harris, 38 King William Rd., Goodwood.
5GA—G. R. Andersen, "Flinders House," Port Lincoln.
5KS—R. A. Sedunary, 157 Churchill Rd., Prospect.
5KV—B. F. G. Nitschke, 18 Hender Ave., Klemzig.
5RX—G. W. Luxon, 27 Belair Rd., West Mitcham.
5SD—R. S. Amos, 31 Balranald Ave., Largs Bay.

Western Australia

6FC—F. G. Clarke, Lot 8, Daley St., Mt. Yokine.
6IW—A. F. Wreford, Seventh Rd., Armadale.
6TR—T. W. Reed, 26 Hope St., Waterman's Bay.

Tasmania

7BC—B. D. Clark, Fletcher St., Stanley.
7RA—J. H. Ratcliffe, 30 Malunna Rd., Lindisfarne.
7RC—R. C. Ireson, C/o. D.C.A., Government Aerodrome, Box 61, Currie, King Island.

Territories

9CR—C. W. H. Rasmussen, C/o. Lutheran Mission, Madang, N.G.

CANCELLED CALL SIGNS

2AAC—M. J. Cosgrove.
2AAV—A. I. Dunicliff. Now VK3AAV*.
2AEE—E. T. Walter. Now VK5EE*.
2AJS—T. M. S. Spence. Now VK2JS*.
2AOE—A. N. Wilson.
2AQU—H. J. Champion. Now VK5HJ*.
2ZAY—I. B. Neil. Name changed*.
3APW—R. M. E. Rees.
3AZA—A. A. B. Slight. Now VK2ZA*.
4IN—F. E. Naylor. Now VK3AQN*.
4TG—A. H. Burton.
5DV—D. B. Vaughton.
5JM—W. J. Mead. Now VK4BM*.
5SA—R. de P. L. Mitchell.
6KR—V. F. Bell.
7DA—A. Andersson.
7ZAC—D. G. Cartwright. Now VK7AC*.
9VG—H. A. Vinning.

* See New Call Signs.

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BOOK REVIEW

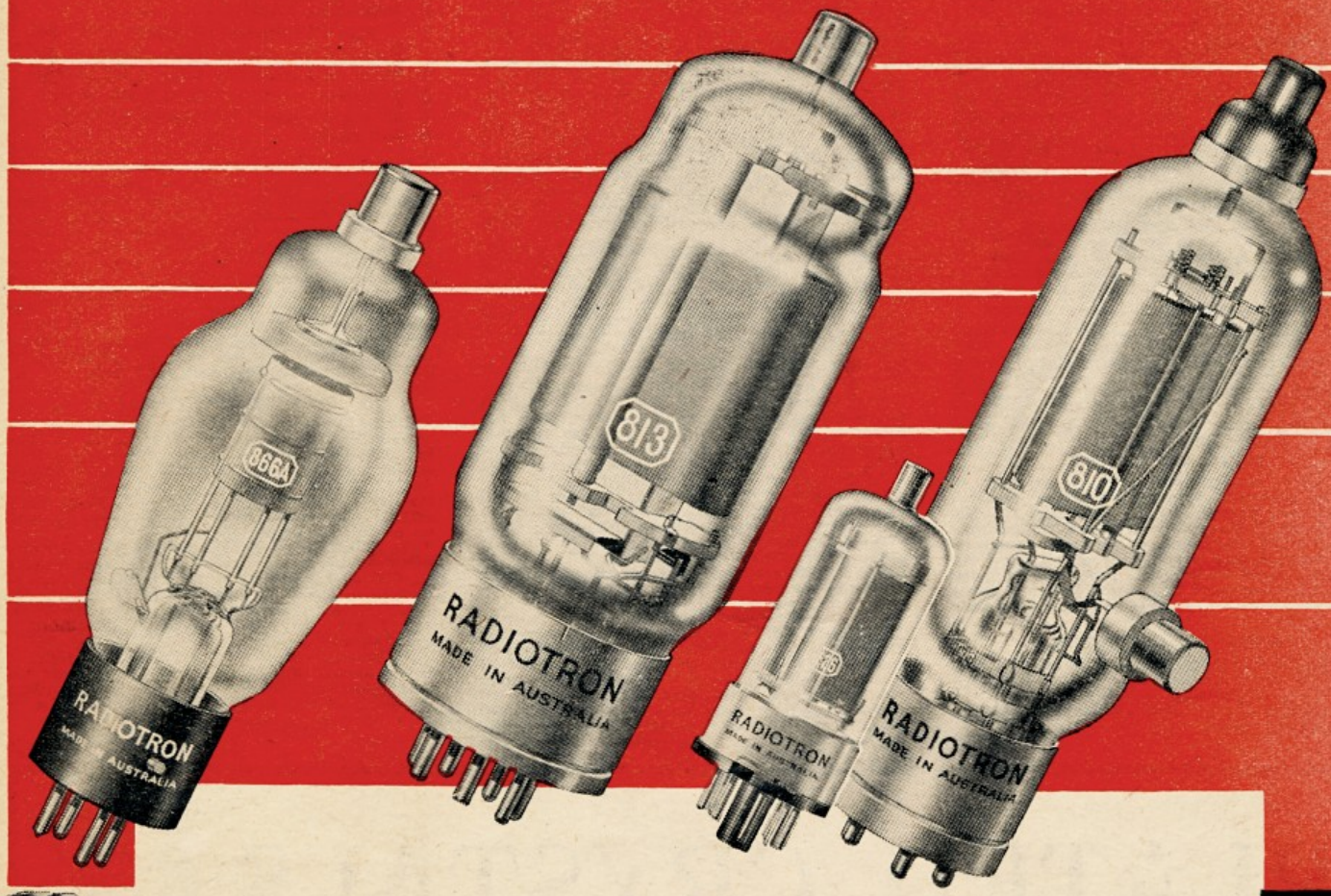
SINGLE SIDEBAND

Under this title the A.R.R.L. have published 175 pages in which are collected everything of value which has appeared in "QST" on single sideband. Some parts are straight reprints, some have been condensed, some have been brought up to date. But everything that you could use today if you were to read the original articles has been retained.

It covers not only the various methods for generating single sideband, but also receiving, linear amplifiers, operating aids and all the other points which go towards making a complete single sideband station.

If you are thinking of taking up single sideband you can do no better than to peruse this comprehensive book. It will tell you the best methods which have been proved in practice and save you a lot of grey hairs.

RADIOTRON POWER VALVES



Today's high standards of radio performance are dependant upon the use of first quality components.

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Be sure of the quality and consistency of your signals by using Radiotron Power Valves.

Important: When ordering valves, be sure to mention "Amateur Radio" so that priority can be given to your order.

AWV **RADIOTRON**

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SHORT WAVE LISTENERS' SECTION*

VICTORIAN S.W.L. GROUP MEETING

The April meeting of the above Group was very interesting. After the general business had been disposed of, 3LN took the chair with 3ZAJ and 3OJ. After much setting up of gear, Len finally put the rig on the air and contacted mobile station 3ALY. During the first few minutes of the contact, the fire alarm rang down in the street and in seconds the brigade came hurtling along. 3LN then promptly asked 3ALY where the fire was, and was it safe for us to stay up top? After the commotion died down, it was found that it was not our place on fire after all, but a cafe around the corner.

After this little episode, 3LN and 3ZAJ demonstrated a beam and how it works by adding and removing elements from the dipole. The evening closed with a grand round of applause to 3LN and Mrs. 3LN (Phyl), 3ZAJ, 3OJ and 3ALY. Once again on behalf of the S.w.l. Group, let me thank all you boys for coming and giving us this fine demonstration, and to V.h.f. Group for making this possible.

SOUTH AUSTRALIAN S.W.L. GROUP

From Mac Hilliand I received a very short report from your Group this month. Mac states that much interest is being shown in the above Group, judging by the enquiries being received. As yet the Group is in its initial stages, but with the interest that is being shown, the Group should soon become quite strong in membership.

VK-ZL DX CONTEST

We were very pleased to hear that one of our VK3 members won the Australian Receiving Section of the VK-ZL DX Contest. His name is Geoff Morris. Well Geoff, congratulations on your magnificent win. Geoff is a very keen member and participates of all the VK3 activities. Geoff received a letter and a very nice Certificate for his effort and no doubt much excitement transpired on receiving this news Geoff.

NEWS ON THE BANDS

21 Mc.: Welcome back to VK land John McKendrick. Hope to see you along at the June Meeting. John has heard the following: KH6, W6, ZL2, ZL1, HC. From Jeff Morris: ZLs, KH, KZ5, HP3, CP5, HC1, ZS1, 2, 5, 6, VS6, VK9, VR2.

14 Mc.: From John McKendrick: KL7, VR2, CT1, ZM6, W1, OE, F3, VK, W0, KR6, KA, KH6, VE8. Len Cragen (of VK5) reports hearing: G2, G3, JA6, KA2, 3, 7, 8, KH6, KR6, VS2, VK9, W0, 3, 5, 6. Jeff Morris heard CO2, ZL3, VF, KL7, CT1, G, TI2, KS6, I1, OD, ZL, ZM, ZK, HC, F8, 9, FI, JA, KA, KP6, KR6, ZS1, G, VU, 4S7, 3V8, 4X4, XZ2. Frank Nolan reports YN4CB in Nicaragu. Michael Ide heard CN8, EA, ZS1, ZM6, VR2, KH6, KA2, W0, 5, 6, 7, 8, VE7, XE1, HC1, CT1, KJ6, KA3, K4, KX6, HR1, G2, ZK1, KL7, KG6, KA7. At my location: W0, 1, 3, 5, 6, 7, 8, 9, KA, KR, KH, 4X4, G3, G2, VS, VR. Mac Hilliland heard KL7, CT1, KR5, KH6, ZE2, ZD6, 4S7, HP3, KH6, JA1, TI2, W5, 6.

7 Mc.: From John McKendrick: W2, 3, 0, KH6. Len Cragen, W3. Michael reports KH6, W6, K2, W5, 4, 3, VK9, and at my location: VK2-9, KH6, KL7, W2, 3, 4, 6, 7, 0.

3.5 Mc.: John heard W0, VK1, ZL, W6. Len heard ZL3 and at my location VK2-9, ZL1, 2, W0, 5, 7.

BROADCAST SHORT WAVE NEWS

U.N. Action on Radio Jamming

The recent action of the United Nations General Assembly in adding a clause to the International Broadcasting Convention requesting countries to refrain from jamming broadcasts was carried 37 votes to nil, there being 17 absentees including the Soviet bloc.

Jamming was first noted by listeners in 1939 after the Munich crisis when broadcasts in the German language became interferred with.

Jamming carries on and the end of the War did not see the finish of jamming. To combat it, all available transmitters are thrown **against** the barrage, some 70 in all.

DX TIPS TO LISTEN FOR

TAP on 9465 Kc. carries an English programme at 7 a.m. from Ankara. Cairo broadcasting to Europe on 9480 Kc. to sign off at 7 a.m. week days and 8 a.m. Sundays with popular music. Latin Americans are active on 15 Mc. and S9 signals are heard from LRU at 7 a.m. and CE1515 on 15.15 Mc. Santiago, Chile, closes at 2 p.m. and PRB23, Radio Record, on 15.139 Mc. at 12.30 p.m. Djakarta is now operating on 6045 and 9710 for all three English transmissions at 9 p.m., 12.15 p.m., and 5 a.m. Vatican Radio is shortly moving to the outskirts of Rome where land has been leased for a new transmitting site. The present English broadcasts are 1 p.m. on 7280, 9646, 11685, 15120 Kc.; 4.15 a.m. on 6190, 7280, 9646, 11685, also English to South Asia on Tuesdays 2 a.m. on 9646, 11685 Kc. and also on Thursday at 2.30 a.m. on 6190, 9646 and 11685 Kc.

S.W.L. CONTEST

Remember that all QSL cards must be received by 30th June, 1955. Entries to contain the following: (1) all cards to be sorted into section entered, i.e. 1, Amateur; 2, S/W Broadcast; 3, Broadcast Band; Section 4 will be determined by the judges who will judge each section and then tally individual totals into an overall number.

(2) A list compiled by the entrant of all cards sent (two copies), one will be returned upon receipt of cards, and will be official notification to entrant of receiving entry. It should also receive formal notice of entry into contest, e.g. I wish to enter the following QSLs in the following sections, etc.

All entries will be returned as soon as judging is completed. Judges' decision is final and no correspondence will be carried on regarding decisions of the judges.

(Continued on Page 15)

* Compiled by John Wilson, 37 Rayment Street, Alphington, Vic.

TECHNICAL PROBLEMS

A letter has been received from a country associate member asking if we would give advice on a technical question.

The Technical Editor will be pleased to advise any member in need of assistance with a technical problem. Just forward your query and a stamped addressed envelope for reply.

FIFTY MEGACYCLES AND ABOVE

NEW SOUTH WALES

The main activity of the V.h.f. Group this month centred around the Autumn Field Day, which was held on 24th April on 2 mx; 18 field stations and 14 home stations participated. The day took the form of a relay, a message was originated in Sydney and sent to VK4 and VK3 via a series of stations, both field and home, located throughout the State.

The Northern link started in Sydney from 2WI (2OA) and thence to 2ALJ (Dee Why), 2ANF/P (Mt. Tomah), 2AZO/P (Calo Heights), 2BZ (Newcastle), 2VU (Singleton), 2ANU (Muswellbrook), 2ATO/P (Barrington Tops), 2HE/P (Blue Knob), 2HO/P (Pt. Lookout), 2AQI (Armidale), 2ATS and 2ADT (Inverell), and 2AHH (Kempsey), unfortunately the signal did not progress past these points, as no stations were available to send the signal further north.

In the South-West link, a second message was originated by 2WI and sent to VK3 via the following stations: 2LG/P (The Summit), 2ZAG/P (Mt. Lambie), 2AOA/P (Mt. Panorama), 2JW/P (Mt. Canobalas), 2WH (Forbes), 2ZAA/P (Kendall), 2AJO (Coolamon), 2RS (Albury), and thence to 3UI/P (Mt. Hickey) and so to 3WI. The return message from VK3 was returned to Sydney via the south and the following stations formed this link: 3UI, 2ZAA/P, 2JW/P, 2GU (Canberra), 2HL/P (Mt. McAlister), 2AJZ/P (Mt. Gilbraltar), 2AWZ/P (Heathcote), 2JX (Wentworth Falls), and so back to 2WI.

The relay officially finished at 12.30, and after this all stations were looking for distant contacts and some very good ones were made, such as 3UI/P to 2WH (310 miles), 2HO/P to 2JX (268 miles), 2HO/P to 2ANF (256 miles), 2HE/P to 2ANF/P (190 miles), 2ATO/P to 2AJZ/P (186 miles), 2ZAA/P to 3UI/P (150 miles), 2JW/P to 2GU (190 miles), 2BZ to 2HO/P (176 miles), and so we ended another very successful field day, and a very good time was had by all. By the way, the mileage given above is approximate.

The results of the D/F Field Day held on Sunday, 27th March, are now to hand and are as follows: 2AJZ/P plus 165 pts., 2ATO/P plus 97 pts., 2ANF plus 50 pts., 2ZAG plus 15 pts., and 2AWZ minus 57 pts.

2WJ has now settled into his new QTH at Bringelly and has erected his 4 over 4 antenna, this he christened during the field day by working 2ATO/P at Barrington Tops.

A few stations have been on 6 mx, but activity is low. Stations logged were VKs 2ANF, 2BG, 2AZN, 2ABR, 2ABH. There is also a whisper of activity to start again on 576 Mc.

We note with interest the increasing use of 80 mx by the v.h.f. enthusiasts for the purpose of furthering their contacts on 2 mx. The Sydney boys have relied upon 2APQ for this job for some time, but now another station has begun using this band. We do hope that John does not get beguiled away from his favoured band (what! Too much noise). Hugo 2WH has continued his good work on 2 mx, and his latest new fields to conquer are 2ANU and 2VU, Muswellbrook and Singleton respectively. Signals have been heard between these locations but much more is to be done before a regular path is established. 2HO, our new Chairman, started off his term of office by taking a 400 mile trip to Mt. Ebor for the Autumn Field Day and was accompanied by Perce 2APQ. They had a very successful trip and contacted 10 stations from this super location. They also heard several other stations, although did not make contact on the air, but they made up for this by paying personal calls on as many shacks as possible on their 400-mile trip home.—2AJZ.

VICTORIA

A record crowd turned up for the April Fox Hunt. Eleven cars and one motor bike started out from the assembly point. On the first location, where the Fox 3LN hid in a blind lane, Norm Dench and 3KD were the first to sweep their headlights into the lane, followed shortly after by 3VZ and 3IE, who made their catch on foot, then as the Fox was leaving the lane, 3YS and 3ADU also made a catch. On the second location, which was amid shrub on the banks of the Yarra River at Kew, the Fox had the pleasure of seeing 3ADU, 3VZ and 3APB, who were following each other, come to within 20 ft. of the Fox car and then turn their cars around and go off in the opposite direction to the other side of the river. Norm Dench and 3KD were next to come to this location and they made a catch, closely followed by 3ALY and 3ZAM. This made Norm and Ray's second "first" for the evening; their catch on the first run made Fox Hunt history as this was the first time the Fox has been caught on the first run of the evening. On the run to the third location Norm and Ray made another catch, this time while the Fox was on the move. Then on the fourth location, where the Fox was hidden in trees off the road in East Camberwell, 3ZAM was first, followed by 3APB, 3KD, 3VZ, 3AHL and 3YS. The final location was at the home of Max 3BQ, who was most surprised when the gang dropped in, as he had not been control station for the evening. Arrangements had been made with John, Max's son. The control station was Graeme 3ZAA, who was ably assisted by Bon 3GG. We wish to thank Max, Mrs. Howden and their daughters for their friendly hospitality in opening their home to the gang for the final post-mortem and get-together for supper in which 37 participated.

The April V.h.f. meeting proved a very interesting one, when Don 3XA demonstrated a v.h.f. signal generator running from 50 to 400 megacycles. The taxi radio on which he demonstrated the signal generator was a 19 tube job, complete with tx, rx and vibrator power supply in a cabinet 10 x 9 x 4 in., which drew only 5 amps. on receive from a 6v. battery. It was a f.m. job and Don gave detailed diagrams and demonstration of the working of the muting and limiting, which had very good figures.

The remainder of the routine meeting consisted of the election of office-bearers for the ensuing year and all of the old office-bearers were re-elected, they are—President, Herb 3JO; Vice-Presidents: Eric 3ADU, Jack 3ZAJ and Alf 3IE; Secretary, Bob 3OJ; and Publicity and Civil Defence, Len 3LN.

Perfect weather prevailed for the final V.h.f. Field Day of this season, held on the first Sunday in May. Those who went portable were 3OJ at Ferntree Gully, 3VZ at Mt. Dandenong, 3IE at Ferntree Gully, 3ADU at Kellor and 3TO at Yallourn. 3LN, 3ALY and 3KD, who were attending the South Western Zone Convention, entered in the field day from the Ceres Lookout in the Geelong area. While at Ceres they gave a demonstration of v.h.f. equipment to other members attending the Convention.

Reports have come to hand that Bram 5ZAB at Narracourte has worked 3AGD and 3HG and has heard 3PG, 3CP and 3AGV. Bram is using a 6J6 converter and has a four el. beam 80 ft. high. He is keeping tentative skeds on 144.576 Mc. from 8 until 8.30 each evening, listening for Melbourne stations. 3AWC at Bendigo reports hearing 3AKR at Westmere.

For those interested, the Fox Hunt is held on the second Wednesday in each month commencing at 8 p.m. from the plantation in College Crescent at the rear of the University. Bring your own supper. The V.h.f. meeting is held on the third Wednesday in each month and is held at the Rooms, 191 Queen Street, unless otherwise advertised in the Sunday morning broadcast.

SOUTH AUSTRALIA

The v.h.f. bands in this State have, over the past few months, been surprisingly vacant, however it seems that with the winter months looming more of the regulars will again be heard in the usual cross-band hook-ups. Even your present scribe has been inactive for approx. three months. However, on completion of these notes, I have a sked with Ken 5KC on 50 Mc., that is if the rig still works. Col 5RO has acquired a new continental v.f.o. and has "plans drawn up" for a new band-switched tx covering 3.5 to 576 Mc. using the new v.f.o. in the front end.

50 Mc.: This band has certainly been very quiet of late in so far as signals are concerned although the usual auto ignition noises are ever present. Heard Ron 5MK and George 5GB in QSO one Sunday morning. Have heard Ron on 14 Mc., what d.c. now Ron? Nil heard from 5JO and 5ON for some time. 5MT replacing 50 Mc. beam for a 21 Mc. beam shortly. Clem 5GL has raised the power of his 50 Mc. mobile tx to 3w. Hope my memory is correct Clem. 5GL and 5FM heard in QSO, talking 2 mx, believe 5RI at Burra is also interested.

144 Mc.: A few stations heard this month, namely Neil 5ZAW using new rig with a QQE03/12 in final with another one as a push-pull tripler driver; sounds nice Neil. 5JN and 5JH also active, but sigs very hard to copy on selective rx—both stations using mod. osc. 5KC, 5ZAA and 5MT also active.

288 Mc.: Quite a few chaps on this band are now using superhet rx's and activity as usual is fairly good. Stations active last month were Howard 5XA, Rex 5KY, Jim 5JK, Jack 5LR, also 5ZAW and Bob 5PU. Bob now using push-pull 15Es in the tx with about 30w. input. Fred 5FT has deserted this band and will now be found tangling with the DX on 21 Mc., with or without negative peak clipper! 5PS appears and disappears on this band with monotonous regularity and seems to only know one word—"testing."—5MT.

TASMANIA

Since the 144 Mc. break-through last month nothing other than local signals have been heard in Launceston. As was to be expected, this break-through was followed by a post-mortem and the result of this was evidently not to the liking of those concerned because during May 7GM and 7BQ have both built new converters and 7LZ has modified his tx.

First 7BQ built a converter similar to the ones in use by 7PF and 7LZ, this used a 6AK5, 6J6 cascode amp. followed by a 6AK5 pentode 2nd r.f. amp., 6AK5 pentode mixer/1.f. amp. with a 6J6 xtal osc./multiplier. 7GM at this time was also re-building and at the last meeting of the Northern Zone, Gordon produced a converter consisting of a neutralised 6J6 r.f. amp. feeding into a 6AK5, 6J6 cascode coupled 2nd r.f. amp., followed by a 6J6 mixer, 6BA6 i.f. amp. and finally to a 6C4 cathode follower. Gordon also used a 6J6 xtal osc./multiplier. This converter was duly examined and admired by all present at the meeting and since then 7BQ has also completed another converter, the same as 7GM's.

During the summer months keen interest was taken by Northern Zone members in evening 144 Mc. tx hunts. 7XW was always in charge of the tx and as the season progressed both hunter and hunted became more cunning and many a good laugh has been had at the expense of one side or the other. This activity has, as was to be expected, increased the interest of our members in v.h.f. and even among our associates some excellent rx's for 144 Mc. have been constructed. One of these is now in use at Beauty Point and has provided us with our first out of town listening post which we have every reason to believe will be a new Z station before next Spring.

It is unfortunate that the change-over from 50 to 56 Mc. has to be right in the middle of our next DX season. This could possibly have a detrimental affect on the Ross Hull Memorial Contest and as many stations will have to be modified, it would be very helpful if our Contest Committee would make an early statement as to what form the Contest will take this year.

For the benefit of those stations wishing to calculate the exact distance of contacts, here is the exact locations of some of the Launceston stations:

7PF—147° 10′ 53″ E.	41° 27′ 14″ E.
7LZ—147° 8′ 12″ E.	41° 26′ 43″ E.
7BQ—147° 7′ 57″ E.	41° 26′ 19″ E.

—7LZ.

— . . . —

S.W.L. SECTION

(Continued from Page 14)

Winners will be notified in "A.R." and through 3WI on Sunday broadcast on 31st July.

It is advised to send your entries by registered mail. All care is exercised while in the judges' hands. All entries must be received no later than last post on 30th June, 1955. Send all entries to Contest Committee, C/o. John A. Wilson, 37 Rayment St., Alphington, N.20, Vic. Remember this is the last month, so act now.

HINTS & KINKS (S.W.L. SECTION)

Simple Code Practice Oscillator

Connect a morse code key across the output of a speaker transformer in such a way that when the key is up, the speaker is shorted out. On "key down" position the short is removed and the speaker operates normally.

Tune your receiver to a strong signal with no or infrequent modulation (D24, Fire Brigade, etc., will do quite nicely). The r.f. gain is backed off and the b.f.o. switched on. In "key up" position, nothing is heard (or very little—or very much, depending on the lengths of lead to the morse key—the shorter the quieter). In "key down" position a tone is heard which is all that is needed for some code practice.

The key specified is a common type available through the disposals, but an ordinary key could be used by inserting the key in series with one of the voice coil leads. However this requires breaking into the wiring on the speaker, whilst with the first mentioned way, the flex is just hooked across the v.c. terminals. Easy, I'll say it is!.—3ZAQ.

"HAM" RADIO SUPPLIERS

(KEN MILLBOURN, PROP.)

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1B5	2/6	6Q7G	5/-	12SK7	10/-	VR22	2/6
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3Q5	5/-	6SA7	10/-	12SQ7GT	2/6	VR35	2/6
5V4	10/-	6SC7	10/-	816	15/-	VR38	2/6
6AG7	15/-	6SJ7GT	12/6	866	£1	VR66	2/6
6B8	15/-	6SK7GT	12/6	834	£1	VR75	15/-
6C5	7/6	6SS7	12/6	884	£1	VR99	5/-
6C8	7/6	6U7G	10/-	954	10/-	VR99A	5/-
6F5	7/6	7A4	5/-	955	10/-	VR102	5/-
6F6	10/-	7A6	5/-	957	10/-	VR103	5/-
6K6	7/6	7A8	5/-	1625	£1	VR105	15/-
6K7	10/-	7B8	5/-	5763	25/-	VR122	2/6
6K7G	7/6	7C7	2/6	EF50	10/-	VR150	15/-
6L7	10/-			U10	2/6	VT50	2/6
6L7G	7/6	7E6	5/-	VR18	2/6	VT51	2/6
6N7	10/-	7W7	5/-	VR19	2/6	VT52	10/-

Full stocks of New Valves available. Prices on request.

Following list are ex Disposals, guaranteed—

1K5	5/-	5U4	12/6	6J5GT	10/-	6V6	10/-
1K7	5/-	6AC7	10/-	6SA7	10/-	12A6	10/-
1L4	5/-	6AG5	10/-	6SJ7	10/-	12K8	10/-
1S5	10/-	6C6	5/-	6SK7	10/-	1625	15/-
2X2	10/-	6D6	5/-	6SL7	15/-	CV92	15/-
3A4	5/-	6H6	5/-	6SN7	7/6	EF50	5/-

C.R.O. Power Supplies, 220-260 AC input, variable HT output: 750v., 1300v., 1900v.; LT output 320v. at 100 Ma. Two 2.5v., one 5v., one 6.3v. filament winding. One 2X2, one 5V4. Complete in metal case 23 x 9 x 14. Few only, £12/10/- F.O.R.

Bendix RA1B Power Supplies, 240 volt AC, 24v. at 1 amp. output 250v. HT .... £5 each

Genemotor Power Supply, SCR522, 24v. input, 150v. and 300v. output at 300 Ma. Includes relay, voltage regulator, etc. A gift at £1. Too heavy for postage.

2.5v. or 4v. Filament Transformers .... 15/- each

Chokes, 15 Henry, 100 Ma. .... 10/- each

Chokes, 15 Henry 175 Ma. .... 20/- each

Solor 28 pF. silver plated wide-spaced Condensers .... 7/6 each

2 uF. 1000v. block type Chanex Condensers 12/6

Relays, A.W.A. Aerial Change-over type, 12v. 15/-

English Carbon Mike Transformers, new 5/-

Locktal Sockets .... 1/6 each

Valve Sockets, ceramic, 8-pin Octal 2/6

LARGE STOCK OF CRYSTALS

100 Kc. R.C.A. Crystals £4

1000 Kc. Crystals, DC11 holder, with two pig-tail connect., 35/-

Marker and Commercial Crystals, price on request. Delivery seven days.

Following is a list of Crystal Frequencies available for immediate delivery. £2 each—

1500 Kc.	5300 Kc.	7020 Kc.	7110 Kc.	8042 Kc.
1900 Kc.	5335 Kc.	7021 Kc.	7120 Kc.	8155.714 Kc.
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2103.1 Kc.	5456 Kc.	7025 Kc.	7125 Kc.	8171.25 Kc.
2112.5 Kc.	5530 Kc.	7032.6 Kc.	7126 Kc.	8176.923 Kc.
2208.1 Kc.	5700 Kc.	7035 Kc.	7130 Kc.	8182.5 Kc.
2218.7 Kc.	5815 Kc.	7042.65 Kc.	7134 Kc.	8183.5 Kc.
3025 Kc.	5892.5 Kc.	7047 Kc.	7135 Kc.	8188.889 Kc.
3062.5 Kc.	6100 Kc.	7050 Kc.	7150 Kc.	8317.2 Kc.
3086.5 Kc.	6350 Kc.	7052 Kc.	7156 Kc.	8320 Kc.
3382.5 Kc.	6375 Kc.	7053.5 Kc.	7163 Kc.	9060 Kc.
3500 Kc.	6450 Kc.	7064 Kc.	7174 Kc.	9125 Kc.
3511 Kc.	6666.7 Kc.	7068 Kc.	7175 Kc.	10 Mc.
3511.2 Kc.	7005 Kc.	7072 Kc.	7725 Kc.	10.511 Mc.
3516 Kc.	7010 Kc.	7073.5 Kc.	7810 Kc.	10.515 Mc.
3527 Kc.	7010.7 Kc.	7075 Kc.	8007.69 Kc.	10.524 Mc.
3540 Kc.	7011.5 Kc.	7077 Kc.	8008.5 Kc.	10.530 Mc.
3825 Kc.	7011.75 Kc.	7079 Kc.	8009 Kc.	10.5465 Mc.
4010 Kc.	7012 Kc.	7088 Kc.	8009.3 Kc.	10.556 Mc.
4070 Kc.	7013.75 Kc.	7100 Kc.	8010.5 Kc.	14.020 Mc.
5050 Kc.	7018 Kc.	7106.7 Kc.	8013 Kc.	14.322 Mc.

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DX ACTIVITY BY VK3AHH†

PROPAGATION REPORT

3.5 Mc.: Openings to **Europe** and the **Mediterranean area** prevailed around 2100-2145z and **North American** signals broke through between 0730z and 1200z.

7 Mc.: On this band North **America** was workable over both the long and the short route (0600-1400z and 2100-2300z) with **South America** and **Central America** between 0600z and 1200z. Times for the **Far East** and the **Pacific Islands** were within 0600-1400z, while **European** break-throughs existed around 0600-0900z over the long path and 2000-2230z over the short path.

14 Mc.: This band showed some improvement although conditions still seemed to be somewhat unreliable. Long-path openings to **Europe** were predominant (0600-1000z) with some short-path break-throughs (1100-1300z) being very infrequent. Conditions to **North America** were likely to exist at all times, but peaks appeared to be 2130-2230z and 0400-0600z.

21 Mc.: A considerable improvement of overall conditions can be reported for this band. With openings to **North America** from 0000z to 0500z, **South** and **Central America** were represented around 0000-0400z. **Africa** could be contacted between 0600z and 0900z, while the **Pacific Islands** and the **Far East** were consistently workable from about 2300z to 0800z. Break-throughs from **Europe** on the 13th, 17th and 21st April, 1955, have been reported.

27-28 Mc.: Comparatively good openings to **North** and **Central America** predominated during the month.

NEWS AND NOTES

St. Martin will be represented by **CM9AA, PJ2AA** and **W1PST** in June (from SCDXC).

Further news from the Southern California DX Club Bulletin: The following stations are active in **Tunisia**: 3V8AX, —AP, —BL, —BP. **ZD9AC** is active on 21 Mc.

VQ9NZK intended to commence operation, but no information on the duration of same is available (from 5WO).

W5VY is looking for VK-ZL on 28 Mc. every day. His frequency is 28.5 Mc. (from 4EL).

Extracted from the DXer of the Northern California DX Club: Call signs KG1AA to KG1LZ will be used by U.S. Amateurs operating from **Greenland.**

The **Cocos Island Group** appears to be back on the map again with **ZC2PJ** on 7 and 14 Mc. (from 3CX, 3JA and BERS 195).

KS4AW is reported to be active on 14 Mc. (from 3CX).

This month we welcome a new representative from VK9 land: Roy 9AU. Let us take this opportunity to extend our best DX wishes and congratulations to the new **Papua-New Guinea Division** of the W.I.A.!

QTHs OF INTEREST

ZD8AA—Tom Shepherd, C/o. Cables and Wireless Ltd., Ascension Island, via Capetown, South Africa.
PZ1QM—Box 631, Paramaribo.
FB8BP—Jack de St. Amand, 141 Avenue Foch, Tananarive.
ZD4BM—Box 260, Tokaradi, Gold Coast.
OQ5CP—Box 982, Elisabethvilla, Belgian Congo.
FM7WP—Andre Leandre, Route des Religieusa, Fort de France, Martinique, F.W.I.
YN4CB—P.O. Box 4, Blue Fields, Nicaragua.
MP4QAL—Fergus Walshe, Decca Navigator Co., C/o. Shell Oil Co., Doha, Qatar, Persian Gulf.
KS6AB—Ray Sparks Caldwell, Pago-Pago, American Samoa.

ACTIVITIES

3.5 Mc.: Neville **2APL** worked W2*, and Roy **9AU** reports Ws, JAs. **3AHH** heard YU3ABC (2130z), DJ1EJ.

7 Mc.: Laurie **2AMB** heads the list with VEs*, GM3CIX*, G6ZO*, GA3AHE*, KP4AZ*, VP9BO*, LU6WD*, and VP6GC on c.w. and W* on phone. Frank **3FC** follows with JAs* and VE*. Austin **5WO** reports JZ0DN* and JA4BB* on c.w. and W* on phone. **9AU** mentions KH6* and JZ0DN, PY2CK, Europeans. Eric **BERS195** heard DU7SV, WP4ABD, 4X4GW, KZ5BE, OH3QJ/MM, KP4YT, ZE3JP, 3V8AB, YI2AM, VQ3FN, KP4AZ, W4GBS/Air Mobile, FA9VN, FA8IH, ZE6JJ, LU6WD, KP4QA, CO3HD, PJ2AE, YV1AI, HR1JZ, YV1AD, FU8AA, HB9IX/MM, KC6CG. **Dave Jenkin** reports KH6, VE. **Norman** Clarke contributes JA1VP, JA1AAX, JA1ACX.

14 Mc. C.W.: 2APL: F*, DL*. **Bud 2AQJ:** SM*, DU9*, KR6*, VE*. **Alan 3CX:** F*, G*, 4S7*, OH*, VR3A*, DL*, KB6*, KP4*, I*, KC6AJ*, VE*, CM9AA* and OX3AL. **Neil 3HG:** VE*, G*, ZS6TE*, KC6AJ*. **Jack 3JA:** PJ2AE*, KC6AJ*, VP9BM*, VP9CB*, VO6U*, VO3X*, VP6KL*, IT1TAI*, 9S4AX*, G*, and ZC2PJ. **Ken 3KR:** KA*, G*, OZ3FL*, HB9*, KG4AP*, VE8AW*, JA*, F*, VP9BM*, PJ2AE*, OE3VP*, CO2WD*. **Bill 3TX:** DL* and other Europeans*. **Eric 4EL:** HB4FE*, HB9*, G*, DL*, KP5TF*. **Bob 4RW:** VK1HH*, EA*, TF5TP*. **John 5HI:** KH6*, LU2GB*, ZP5GM*, KP4TF*, 9S4BE*, I1BNU/Trieste*, EA*, PJ2AJ*, YU2DU*. **Ray 5RK:** OZ7SN*, SM3BIZ*, LA*. **5WO:** OK*, Ws* (long path). **9AU:** VS2DB*, ZS1AH*, OZ*, SM*, G*, DL*, OH*, KX6*, MP4QAK*, ET2AB*, ET3LF*, JZ0AG*, HZ1AB*, GI4RY*, PA0*, KC6* and TA3, ST, SU1DD, VP4LZ, EA, CN8HK, LB3OD, EI4X, FB8BR, GW3, YU3. **BERS195:** KP6USA, KP4AZ, KZ5OM, ZS1PD, VK1VH, VS6AE, JA, LU9DZA, LU1FBQ, LU8FBH. **Dave Jenkin:** KA, F, DU1, KJ6AZ, VS6CG, KR6, JA, KP4AZ, VS1, VE8AW, LA8AB, GI4RY, OH, DL, SM, 4S7, OE2HW, I, F, EA, G, ZS1PD, KL7AWB.

14 Mc. Phone: 2APL: W4MZZ/KL7*, I, YV5AB*. **2AQJ:** G*, LA*, CT1PK*. **Alan 3HL:** Gs*, KH6*. **3JA:** VR2AP*, EA*, GW3FVI*, DL*, KR6*, OH*, VU2RC*, PA0IS*, SM*, ZS1SW*. **3KR:** KL7ADR* and KS4AW. **Stan 3TE:** KL7*, HC1FG*, HR1*, G*, I*, OH5NG*, OZ*, EA*, DL*, VE*, SM*, ZM6AT*. **Don 3ADI:** VE*, G*, 4X4CX*, EA*, CT1SX*, YV5AB*, YN0YN*. **Gerry 3AGQ:** VK1VH*. **4RW:** KP6AK* HC1ER*, OA5G*, VR3C*, TI2GC*, G*, KC6ZB*, YV5AB*, KL7AON*, ZM6AT*, VE8BV*, TF5TP*. **5HI:** VK1VH*, GC6FQ*, G*, YN4CB*, ZS5OV*, YN1RA*, KL7*, KH6*. **5WO:** KA/JA*, G*, YV5EU*, ZS4GK*, VE7*. **9AU:** ET2AB*, KX6*, VS6*. **Jim Hunt:** LA, OH, SM, F, OE13USA, OZ1AD, ON4DB, ON4OC, DL, TF2WAB, CT1PK, YU, SVOWM, HZ1AB, I, HB9, MP4-KAB, VS6CT, PI1J, PA0CT, GI3GXP, EI5I, GM, GD3UB, ZS6BW, ZS1SW, 3V8AS, OA5G, HC1FG, XE2KW, CO2BL, VS2, VS6, 4S7, KC6ZB, KC6UZ, KG4AP, KG4AF, VR2, VU2, KP6AK, XZ2ST, KJ6BG, ZM6AT, DU1. **Dave Jenkin:** KL7BW, A0IJ, XE2NF. **Norman Clarke:** KA, KM, KX6, ZM6AT, ZS5JM, KL7AZN, KL7ADR, XE1CY, TI2GC.

21 Mc.: Syd **3CI:** Ws*. **Angus 3IY:** ZSs*. **Percy 3PA:** ZD6RD*, ZE2JK*, VQ4EU*, ZS5NZ*, ZS5MP*, ZS5CU*, ZS2FA*, ZS1BK*, ZS5OA*, ZS6AND*, CP5EK*, VP6GT*, VP6FR*, VP5SC*, HC1FS*, KZ5MB*, KZ5AS*, KZ5WZ*, KZ5CP*, HK4DF*, HK4AM*, YS1RA*, HP3FL*, TI2RC*, Ws*, KH6*, KA/JA*, W4VVU/MM*, W3HXE/MM*, W7FKQ/MM*, K2KZX/MM*. **3AGQ:** Ws*. **Len 3ALD:** KZ5CP*. **4EL:** YN1AA*, 4S7YL*, HP3FL*, HC1FS*, HC1ER*, HC1ES*, G3ADC/VS2*, VS6AE*, VS6CZ*, KG6*, VU2*, JA*, KA*, MP4KAC*, KR6*, CR9AH*, ZM6AR*, ZS1JA*, ZS5HX*, ZS6LF*, ZS6NZ*, ZS6WS*, CR7AA*, W3OZA/MM*, W3HXE/MM*, W1OSF/MM*, W2ZXW/MM*, W5AXI/MM*, W6KUY/MM*, and Ws*. **Max 4HD:** HP3FL*, CP5EK*, HC1FS*, YV5EC*, VP6GT*, VP6FR*, VP6WR*, ZS5NZ*, YS1RA*, FA7ZA*, ZD6RD*, Ws*, KH6*, KA/JA*, KZ5*. **5WO:** KZ5CP*, HC1FS*, HP3FL*, YS1RA*, VS1*, ZS6BW*, ZS6AND*, ZS6CV*, ZS5CU*, ZS6LF*, ZS5HX*, CR7AG*, K2KZX/MM*, KH6*, Ws*. **Jim Hunt:** ZD6RD, ZE2JK, OQ5RU, VQ4FK, VQ4EF, CR7BB, ZS1, ZS2, ZS5, ZS6, KZ5, CP5EK, HC1, XE, TI2, HK4, VP6, YV5, HP3, G3, DL6, MP4, OD5, 4S7, VS6, VS2, DU7, VS1, JA/KA, KR6, KG6, KH6, AI3AH, AI3AX, Ws. **Norman Clarke:** K2, KG6, KZ5, HP3, ZS6, XE1, TI2.

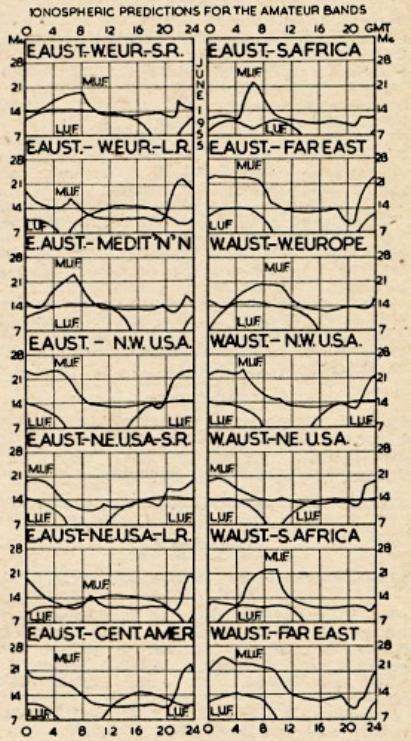
27-28 Mc.: 2ID: heard Ws and **2AQH** worked a number of Ws* as reported by **3IY. 4EL** mentioned W5VY*, K6EXG*, W0ZRX/MM*, and KH6AIO. **4HD:** contributes W5VY*, W6HBE*, KH6AFS*, W4NJM*, K6EXG*, W6QLB*, W6ZOX*, W6DKO*, W6IH*, HP3FL*, K6CDS/KH6*. **Jim Hunt** heard KA8 and KA2.

Rare QSLs were received by 2AMB: VR3A (7 Mc.). **3CX:** MP4QA. **5HI:** LU7BO, LU3EB, HC2JR, CO2BK, PJ2AA, VQ2W, VR3A, FB8BC. **5WO:** HC1ES, AP2Q, YV5CE, LU8EN, LU4DMG, SV0WL, VR3A, YI2AM, HZ1AB, FR7ZA, VS5KU, EA9BC. **9AU:** SV0WL. **BERS195:** ST2NG, VP6KL, VR3A, VR3D, SM8CWC, 5A3TF.

Thanks to the Northern and Southern California DX Clubs, and VKs 2ID, 2AMB, 2APL, 2AQH, 2AQJ, 3CI, 3CX, 3FC, 3HG, 3HL, 3IY, 3JA, 3KR, 3PA, 3TE, 3TX, 3ADI, 3AGQ, 3ALD, 4EL, 4HD, 4RW, 5HI, 5RK, 5WO, 9AU, and s.w.l's. BERS195, Jim Hunt, Dave Jenkin, and Norman Clarke.

† Hans J. Albrecht, 10 Belgravia Ave., Box Hill North, E.12, Vic.
* Call signs and prefixes worked.
z — zero time—G.M.T.

PREDICTION CHART, JUNE, 1955



FEDERAL, QSL, and DIVISIONAL NOTES

FEDERAL

Fed. President: W. T. S. Mitchell, VK3UM.
Fed. Secretary: L. D. Bowie, VK3DU, Box 2611W, G.P.O., Melbourne.
QSL Bureau: R. E. Jones, VK3RJ, 23 Landale Street, Box Hill, E.11, Vic.
DX C.C. Manager: A. G. Weynton, VK3XU, 30 Park St., West Brunswick, N.10.

NEW SOUTH WALES

President: Jim Corbin, VK2YC.
Secretary: Harry Hickin, VK2ACH, Box 1734 G.P.O., Sydney.
Meeting Night: Fourth Friday of each month at Science House, Gloucester Street, Sydney.
Divisional Sub-Editor: Ted Whiting, VK2ACD, 16 Louden Street, Five Dock.
QSL Bureau: J. B. Corbin, VK2YC, 78 Maloney St., Eastlake, Sydney (Inwards and Outwards).
Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey; **Newcastle:** Ron McD. Stuart, VK2ASJ, 98 Dunbar St., Stockton; **Coalfields and Lakes:** Harry Hawkins, VK2YL, 27 Comfort Ave., Cessnock; **Western:** W. H. Stitt, VK2WH, Cambijowa, Forbes; **South Coast and Southern:** Eric Fisher, VK2DY, 2 Oxlade St., Warrawong; **South Western:** J. W. S. Edge, VK2AJO, Wallace St., Coolamon; **St. George:** Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah; **Western Suburbs:** Barry White, VK2AAB, 33 Flavelle St., Concord.

VICTORIA

President: G. Dennis, VK3TF.
Secretary: C. Gibson, VK3FO.
Administrative Secretary: Mrs. May, C.O.R. House, 191 Queen St., Melbourne.
Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.
Divisional Sub-Editor: K. E. Pincott, VK3AFJ, 14 Dunscombe Ave., Ashburton, S.E.11.
QSL Bureau: Inwards—Graham Roper, VK3ZB, 3 Queen Street, Surrey Hills, Vic. Outwards—Frank O'Dwyer, VK3OF, 190 Thomas St., Hampton, S.7, Vic.
Zone Correspondents: Central Western: W. J. Kinsella, VK3AKW, Magdala, Lubeck; **South Western:** W. Wines, 11 Redford St., Warrnambool, and E. Giddings, VK3ANQ, 8 Nelson St., Warrnambool; **North Eastern:** A. D. Buchanan, VK3FD, "Booroondal," Wahring; **Far North Western:** M. Folie, VK3GZ, 101 Lemon Ave., Mildura; **Eastern:** C. J. Arnold, VK3AJA, McAlister St., Stratford; **North Western:** C. Case, VK3ACE, Cumming Ave., Birchip; **S.w.l. Group:** John Wilson, 37 Rayment St., Alphington, N.20.

QUEENSLAND

President: J. T. Hope, VK4XL.
Secretary: W. A. Young, VK4YA, Box 638J, G.P.O., Brisbane.
Meeting Night: First Friday in each month at the Royal Geographical Society Rooms, Ann Street, City.
Divisional Sub-Editor: J. T. Hope, VK4XL, Royal Parade, St. John's Wood, Ashgrove.
QSL Bureau: Inwards—J. Files, VK4JF, Wanda St., Buranda; Outwards—Miss Clair O'Brien, 93 Jardine St., Stafford.

SOUTH AUSTRALIA

President: G. M. Bowen, VK5XU.
Secretary: R. G. Harris, VK5RR, Box 1234K, G.P.O., Adelaide. Telephone: J 1151.
Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide.
Divisional Sub-Editor: W. W. Parsons, VK5PS, 10 Victoria Avenue, Rose Park.
QSL Bureau: Geo Luxton, VK5RX, 8 Brook St., West Mitcham, South Aus. (Inwards and Outwards).

WESTERN AUSTRALIA

President: F. A. T. Tredrea, VK6FT.
Secretary: J. Mead, VK6LJ, Box N1002, G.P.O. Perth.
Meeting Place: Perth Technical College Annexe, Mounts Bay Road, Perth.
Meeting Night: Third Tuesday of the month.
Divisional Sub-Editor: D. E. Graham, VK6HK, 110 Edinboro St., Mt. Hawthorn.
QSL Bureau: Jim Rumble, VK6RU, Box F319, Perth, West. Aus. (Inwards and Outwards).

TASMANIA

President: F. J. Evans, VK7FJ.
Secretary: W. G. Tait, Box 371B, G.P.O. Hobart.
Meeting Night: First Wednesday of each month at the W.I.A. Club Room, 147 Liverpool Street, Hobart.
Divisional Sub-Editor: V. F. Dore, VK7JD, 29 Brent Street, Glenorchy.
QSL Bureau: K. A. Johnston, VK7RX, 34 Tower Road, Newtown.
Zone Correspondents: Northern: M. A. Chaplin, VK7CA, 56 Trevallyn Rd., Launceston; **North Western:** R. K. Wilson, 11 Cunningham St., Burnie, Tasmania.

PAPUA—NEW GUINEA

President: F. M. Nolan, VK9FN.
Secretary: D. F. Lloyd, VK9OQ, C/o. O.T.C. Receiving Station, Port Moresby.
Divisional Sub-Editor: W. Holland, VK9BW, C/o. P.O. Box 76, Rabaul.
QSL Bureau: D. H. Beadel, VK9DB, C/o. P.O. Box 107, Port Moresby.

FEDERAL

APPOINTMENT OF FEDERAL EXECUTIVE FOR 1955-56

The Victorian Division, as the Headquarters Division of the Wireless Institute, has advised of the appointment of the President, Vice-President and Secretary, to the Federal Executive for 1955-56. The appointments are as follows:—

President: William T. S. Mitchell, VK3UM, 1946 Malvern Road, East Malvern.
Vice-President: G. Maxwell Hull, VK3ZS, 22 Dryden Street, Canterbury, E.7.
Secretary: Douglas Bowie, VK3DU, 22 Norfolk Road, Surrey Hills, E.10.

The Federal Executive being responsible to appoint all further officers, the following are announced:—

Treasurer: G. A. C. ("Rick") Ewin, VK3AGC, 55 Dendy Street, Brighton, S.5.
Business Manager: William J. Falconer, VK3AWF, 21 Irilbarra Rd., Canterbury, E.7.
Public Relations Officer: William R. Gronow, VK3WG, 2 Anthony Street, Glen Iris, S.E.6.
Federal Co-Ordinator of Civil Defence Emergency Networks: George Glover, VK3AG, 54 Watt Street, Box Hill, E.11.

Bill Gronow, in retiring from the chair, can look back on a very busy year. His continued liaison with those responsible for the various services has done much to smooth the way for a better understanding. In taking up the duties of Public Relations Officer, he will be able to put to good use the knowledge he has used so well in the past.

Although new to the Presidency, Bill Mitchell will not be new in experience of Executive. His many years as Secretary and more latterly as Business Manager, will be a splendid preparation for the onerous duties that befall him. His experiences with Television, whilst in England, will be of extreme benefit now that this medium is about to arrive in Australia. His knowledge of Awards and their ramifications will be most valuable now that our "Worked All VK Call Areas" is about to become operative.

A new member to Executive is Bill Falconer. With the profound knowledge of an actuary to apply to business tasks, Bill is particularly fitted for the position of Business Manager. His active work in trying to find an equitable set of rules for the Remembrance Day Contest has already brought him into contact with many members and augers well for the future.

And last, but by no means least, Max Hull, our new Vice-President. It would be futile to attempt to introduce this most energetic ex-Federal Secretary. The effect of his guiding hand will be seen in many of Federal Executive's projects, and particularly the Australian Radio Amateur Call Book. Members can confidently await more in the future.

NEW TRAFFIC LINK TO VK9

The Federal Traffic Manager, Doug. Paine, VK3FH, is pleased to announce that a new traffic link has been established with the Papua-New Guinea Division. The Traffic Manager at the VK9 end is Doug. Lloyd, VK9OQ. When contact was first made greetings were sent from the new Division and these were warmly reciprocated by Federal Executive on behalf of all other Divisions. In view of the distance and time factor, it is certain this traffic channel will be kept busy.

FEDERAL COUNCILLORS

Federal Executive notes with pleasure that Joe Brown, VK7BJ, has again been appointed to the position of Federal Councillor for VK7 Division. Those whose duties bring them in contact with this conscientious worker appreciate his wholehearted co-operation and wish him well for the coming year.

It has also been noted that Fred Bail, VK3YS, has found it necessary to vacate the position of Federal Councillor in the VK3 Division. During his period of holding this office, Fred has been most active on behalf of his Division and the Institute in general. It is hoped that the tenacity of purpose, which he displayed as a Federal Councillor, can be applied in a similarly productive field elsewhere. The incoming Federal Councillor for VK3 is the well known Russell Bradshaw, VK3SX. With his inimitable style and unfailing good humour, Russell will prove a worthy counterpart to Fred.

AWARDS MANAGER

Yet another change in Federal spheres is that of Awards Manager. Glen Morris, VK3BZ, after many years in this office requested Federal Executive to find a successor. It was with regret that Executive set about this task. However, Gordon Weynton, VK3XU, former Vice-President of Federal Executive, has indicated his willingness to assume this exacting position. Executive, and the Divisions generally, are very fortunate in securing a person of Gordon's ability.

AMENDMENTS TO FEDERAL CONSTITUTION

Under the direction of the Federal Council of the Wireless Institute of Australia, the Federal Executive hereby gives notice that it is intended to alter the Federal Constitution (1947) of the W.I.A. as follows:

Section 59: By inserting after the words "The Tasmanian Division," the words "The Papua-New Guinea Division."

Section 29(a): By inserting immediately after the word "'Proficiency," the words "or Limited Amateur Operator's Certificate of Proficiency."

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

At the moment of writing, Graham Roper, VK3ZB, the Victorian Division Inward QSL Manager, is laid aside with illness. We hope you make a speedy recovery Graham.

Was pleased to see Jim Austin, VK6SA, ornamenting Melbourne town during the first week in May. Jim was over for the I.R.E. get-together. Says it is five years since last here, but it doesn't seem that long. Jim is in a good paddock if appearances count for much.

Bill Holland, VK9BW, one of the old identities of that territory, plans a trip to Melbourne next year around Olympic time. Says it is long time since last down South and that business is good around his area.

VK2AAD/MM on S.S. "Teralba" on the Newcastle-Melbourne run seeks QSOs. Runs QRP, but puts in a good signal on c.w.

VK6EJ, who is ex-G2AJU, seeks VK3 contacts on 3.5 Mc. band. He is breaking into the farming game, but finds time for Amateur Radio work after sundown.

ST2NG presently vacationing in Northern Ireland is shortly returning to Khartoum and will be looking for VK on 7 Mc. c.w. around 1600-2000 G.M.T. from end of May onwards.

BERS195 is off again on his annual jaunt to VK7 from mid-May. Will be domiciled in the Launceston region for approx. six weeks. His wails about missing his beloved football will probably reach across the Strait. He is an ardent supporter of Carringbush. The body blow inflicted by Hawthorn on May 7 will take years to forget.

Writer is presently planning a month's trip to the Shaky Isles for September-October next, during a spot of furlough. The XYL had her ear to the ground and smelt out the proposal and insisted on her inclusion in any plans. This unforeseen contingency could prove to be the last straw that could break the none-too-healthy purse and wreck the whole idea.

Doug. Beadel, VK9DB, the newly appointed QSL Manager for the VK9 Division, advises that the mailing address is Box 107, Port Moresby, Papua. Commenting on band conditions during April, Doug. says that DX is impossible on 80, difficult on 40, but 20 mx has been behaving well with lots of "pickings." He also states that 21 Mc. was patchy and that he worked an occasional KA, KG and KH on 28 Mc. He states, however, that when 28 Mc. was useable for those contacts, 21 Mc. gave the

same results with an increase of one S point. He put up a rotary 8JK some six months ago —wooden frame and dural elements, and is very pleased with the results, having added 30 new countries to bring the tally to 151 worked. He will be absent from Port Moresby on inspection duties until mid-June.

Bill Storer, VK2EG, ex-VK1EG, has recommenced duty at Telegraph Branch, Sydney. Bill spent practically the whole of his leave after return from Mawson in cleaning up the mess left by five feet of floodwater through his home at Muswellbrook. He lost a considerable amount of radio gear through flood damage. Bill is to be married on June 11 and the honeymoon will be spent in VK7. Plans to look up VK3 friends on the return trip.

— . . . —

NEW SOUTH WALES

The March general meeting was held at Science House, Gloucester St., Sydney, on 24th, and a creditable audience attended to enjoy a pleasant evening's entertainment. Jim Corbin, the President, opened the meeting and welcomed the visitors in the person of Vic. Randall, ZC5VR; Col Wade, ex-ZS4A, ex-G8CD; Mrs. Thrum, and Mr. Thrum, Snr. All were welcomed by members in the usual manner.

Letters were read by the Secretary, Harry 2ACH, from the Chief Secretary's Department and from the Premier's Department, offering the thanks of the authorities to the W.I.A. for their part in the recent flood emergency.

The President introduced Lieut-Commander Greg Thrum, R.A.N. (VK2ANP), who gave a very interesting discourse on Naval Communications and outlined some of the difficulties which are encountered in maintaining a multiplicity of channels of communication. This lecture was followed by the screening of a film, "Coronation Cruise of H.M.A.S. 'Sydney' " and we are very much indebted to Greg for his part in making the screening of this film possible. This was followed by a further film "Overland Adventure," a film of the Redex Trial of 1954, arrangements for this screening were in the hands of Bill Lewis, 2YB. All agreed that a pleasant evening had been spent and Bill Lewis proposed a popular vote of thanks to Greg for his effort.

Barry 2AAB placed a motion on the books to expedite the establishment of a Novice License by the P.M.G. Department; this motion was carried unanimously.

Charlie 2AWQ gave details of the N.S.W. Co-operative. The position at present is good, but it could be bettered by members and all are asked to contribute to the limit. Send your subscriptions to the Secretary, Box 1734, G.P.O., Sydney, and lend the Institute your money so that the establishment of a permanent headquarters in Sydney will be realised. Plans are well in hand in this matter and not only city members, but those who visit us from the country must realise what an advantage this will be. So chaps, get behind your Council and keep the money rolling in. Further details will be given in the weekly broadcasts.

The Treasurer is willing also to handle your subscriptions for the year, many have already been received and receipts issued, so keep Stan busy. The meeting closed at a late hour and all were shepherded off the premises by our friend the Caretaker. The meeting concluded in the usual place.

ZONE NOTES

Notes from the city area this month are rather sparse, but we will endeavour to fill in for those who could have sent some jottings to us. It appears that a few of the Sydney boys are getting among the occasional DX offering on 14 Mc. 2APT gets out better than most, works on 2 mx quite easily from Mount Lewis, also gets his transmission into a set in Wiley Park, hi. Ask 2AAB for details Jack. 2AUR joins the pantomime at times; busy putting a small beam together, painting a tower, etc. This bloke will ease off soon and will be found in the garden more. 2FA still has his troubles, best of luck Horrie. 2GE has a nice signal, had to listen to 2AYE recently, hi. Looks as though 2AYD will be working Maritime Mobile soon, will be listening Dave.

Ellsworth, W4VVU/MM, is off our shores again, puts out a beautiful signal from the "Pioneer Reef" and will, we feel sure, welcome visitors while in port. 2AHU still doesn't know how to put his tx together, but one of these days will appear we feel. 9OK still around the place and enjoying himself. 2AAH busy with study and work, will be on during the holidays no doubt.

EASTERN SUBURBS

Ken 2SD, of Bondi, is having teething trouble with 144 Mc. receiving gear. 2ASE is another 144 Mc. man in a spot of bother, with his p.p. 6J6 G2IC converter having jibbed somewhere. Interest is being shown in 144 Mc. by some of the Waverley Radio Club members; Ivan 2TN having been heard. It is believed that those planning to get going include 2GE, 2MB and 2ABV. 2NO ran into extensive trouble in the lengthy humid spell, with the loss of a 1,000v. power transformer, a Class B driver transformer, and a sub-modulator interstage transformer—all together. He found also that the 300 ohm ribbon feedline to his twin skeleton slot array for 2 mx was open circuit in both legs.

Not much heard from 2FA these days, but it is believed that Horrie has a real nigger in the b.c.i. woodpile. With 20 mx being rather unattractive in the early and mid-evening hours, it is not surprising to find some of the steady users of that band migrating to 40 mx. Have noticed quite a few, both in the Eastern and other suburbs, who no longer scoff at thoughts of 40 mx, but even call CQ thereupon.

Welcome to 2AAX, of Maroubra, a new arrival on 40 mx; Jack was using an AR2B, grid modulated, and was not satisfied with the modulation. Ted 2AHQ says he will soon be active again after about eight years' rest. He has already made a concrete base for a new 20 mx beam. Another old timer absent for several years has been heard frequently lately on 40 mx; he is Tom 2AGA. From what I hear, Tom is getting interested in 144 Mc. Vince 2VA very busy with s.s.s.c and getting good results. 2AIF intends putting up a 20 mx beam; guess Ray will specialise on c.w. with his electronic key.

Lt. Commander Greg Thrum, of Naval HQ Amateur Radio Station VK2ANP, again organised a Navy set-up in the combined services exhibit section of Sydney's Royal Easter Show, but after a day's battle with the very excessive background accompaniment of electrical appliances and suchlike, gave up the unequal struggle and closed down. Bad luck indeed. The way VK4WI got over similar trouble at the Queensland Industries Fair was to provide for reception at a distant point—four miles or so—with a 2 mx link between. QED.

Although not strictly within the orbit of this region for activity notes, the hefty signal now hitting this part of Sydney on 2 mx from Norm 2ALJ is indeed fully local. It comes from his new location at Dee Why heights.

Some locals are talking of ground plane aerials for h.f. bands with all the assurance that such will be the answer to most problems. This scribe hastens to confirm that a properly functioning g.p. is a first rate radiator at low angles, but it has two serious disabilities for use in congested areas. Firstly, it has a habit of getting into b.c. rx's with annoying intensity, and secondly, on reception, it seems to reach out to drag in every scrap of local electrical noise. They are penalties to be paid for vertical polarisation, but nevertheless, the g.p. is still an excellent proposition.

NORTH COAST AND TABLELANDS ZONE

The foremost topic for April was, of course, the Urunga Convention, most details of which were published last month. There was, however, one important feature which was not fully expounded, viz. the Friday night discussion group which covered a wide range of subjects, particularly as both our Federal Secretary and our State President were in attendance.

It was unanimously decided to hold the 1956 North Coast and Tablelands Convention at Urunga as it has become a focal point for many of the zone members living on the Western side of the Divide, and has many advantages to offer that are not possessed by other towns.

The Committee for arranging the 1956 Convention is as follows: Patron, 2XO; President, 2AHH; Vice-President, 2ADN; Secretary, 2FH; Organiser, 2PA; Sydney Liaison Officer, 2ACD.

Alan 2FH answered many questions re disposals and touched on the difficulty of giving sufficient descriptions of goods, difficulty of advising country members of such things as tubes, etc., which are disposed of at meetings and delivery of same. Taken all round it would seem that the zone is receiving its share. Alan took away quite a few suggestions for improving the service to country members. Things in this regard may be slow for a while as supplies are short.

Quite a deal was said in regard to permanent mobile licenses, far too much to print here. Suffice is to say that F.E. are really on the job in this matter. After a discussion on the merits and possible conditions of Novice License, the meeting broke up so that the boys could get some sleep before breakfast.

The President, 2YC, addressed those present at the Saturday evening "do" for a considerable time in regard to progress made in handling flood traffic. A full report on this would take pages, but briefly it would seem that big things are moving and that something concrete will eventuate. The problem is of course, how soon? It was fully impressed upon members of Council who were present that we want a uniform procedure adopted and a rapid handling of traffic at the Sydney end. Many views were expounded and I think the various Councillors have taken home a better outlook on the requirements of the man in the emergency area.

The next gala event for the N.C. & T. Zone was the V.h.f. Field Day on 24th April. 2HO operated from Point Lookout, 46 miles east of Armidale, using 20w. and a 3 over 3 antenna. His bag included 2ATS Inverell, 2AQI Armidale, 2AHH Kempsey, 2HE/P Comboyne, 2ATO/P Barrington Tops, 2BZ Newcastle, 2JX Wentworth Falls, 2ANF Mt. Tomah, and heard one Sydney station. 2HE/P was heard quite well at Kempsey, but no sign of the other stations, except 2HO/P who was pounding in at R9 plus.

A newcomer to the zone will shortly be 2ATU who is permanently mobile throughout northern and western N.S.W. and he would appreciate contacts. During June, Port Macquarie is holding its Festival of the Pines and it is hoped to have VK2WI on exhibition.

It was disappointing that more stations were not heard or possibly operating in the northern part of the zone, to help get the official message through to VK4. The message got as far as Inverell, Ebor and Kempsey, so it had great possibilities of reaching its destination, 4WI, had there been a link available further north. Jack 2AAR has made a reappearance on the band, 2PA and 2AVG at R.S.L. Dinner recently. Ted's car had a "bump" and now out of commission—running on Jungle Juice?

SOUTH WESTERN ZONE

A new course on instruction has just started at the Griffith Radio Club with a number of new members attending. Club members qualifying for A.O.C.P. in the past are Ted 2AXD, Evan 2ACS, Brian 2ZBJ, while Bruce Fleck and George Harriman are waiting for their limited call signs. Brian 2ZBJ has commenced construction of a 2 mx rig with an 829B final. Griffith members were pleased to have Eric 2DY from Wollongong visit them recently. Ted 2AXD has moved to Narromine and the zone is sorry to lose such a keen member. Geoff 2BQ, Jim 2TC and Roy 2DO have been heard on the lower frequencies. Jim 2AJO and Don 2RS are still very actively delving into the wonders of 2 mx. Peter 2APP is doing a major re-build.

It is expected that the S.W. Zone Convention to be held at Albury in October will be a big success as usual, so build up that portable gear chaps and be ready when the time comes.—2PL.

We might add to these notes a plea for more notes from the zones. Why not follow the lead of the S.W. Zone, each month I receive notes from a different member of that zone, so think it over chaps and keep the zone in the news. Thanks for co-operation in the past.—2ACD.

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VICTORIA

The next meeting of the Victorian Division will be held on Wednesday, 1st June, at the Melbourne Technical College when Roth Jones will lecture on "Amateur Radio in the Antarctic." This will be a brief review of activity in the Antarctic from 1947 to 1955.

QSL CARDS

There is a considerable number of unclaimed QSL cards at the Inward Bureau, and Graham would be very pleased to clear them out. If you cannot get in to the meetings to collect them, then please send a stamped addressed envelope and they will be posted back to you. The address of the Bureau is G. Roper, 3 Queen Street, Surrey Hills, Vic.

80 METRE TRANSMITTER HUNT

Thirty-five attended the April 80 mx Tx Hunt. The tx was hidden by Laurie 3ALY and was located at Arundel, just past Keilor, by the winner Len 3LN, second place going to Jack 3VZ and third place to Reg. 3ZAD. A much better signal was received from the tx at the assembly point as Laurie had spent a lot of time on the gear pepping it up and Norm Dench has kindly donated a 6L6 final tube. The result is a very much improved tx. This Hunt was unique in that every one of the competitors had arrived on the location and had been searching for the tx for some considerable time, some for nearly three quarters of an hour, before the last to arrive, Len 3LN, actually located it.

Laurie had very cunningly hidden the tx in the middle of some box thorn bushes on the side of a rather steep bank of the Maribyrnong River at Arundel. He had carefully cut a path into the middle of the bushes, hidden the tx and then carefully replaced the bushes so that there was no sign of where he had made his entry. The car park on the opposite bank of the river provided an excellent grandstand view for the non-competitors and XYLs. This was

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Housed in attractive plastic case, this Microphone is ideal for home recording and public address, etc. Response unexcelled for its size and price. The performance is not affected by vibration, shock or low frequency wind noise. Omni-directional frequency response substantially flat from 30 to 7000 c.p.s. Recommended load resistance not less than 1 megohm dependent on low frequency response. Can be supplied complete with switch and floor stand adaptor as required at a small extra cost.

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Designed to meet even the most exacting requirements, this Microphone incorporates the world famous floating crystal sound cell construction. Its special characteristics are that its fine performance is not affected by vibration or shock. The fidelity is not impaired by low frequency wind noise.

SPECIFICATION

Recommended load resistance—not less than 1 megohm.
Output level —65 db ref. 1 volt/dyne/cm².
Frequency response—substantially flat from 30 c.p.s. to 10,000 c.p.s.
Directivity—non-directional.
Size—2⅛" spherical diameter.
Connector—Standard international 3-pin.

£24/19/6

GENERAL PURPOSE MICROPHONE

MIC 35

£2/15/-

The MIC 35, undoubtedly the best value ever offered, is ideal for amateur transmitters, public address, etc. Housed in an attractive die-cast case, it features a high sensitivity and substantially flat characteristics. Provided with a built-in shunt resistance of 2 megohms, it will, when connected to the grid of the input valve, give a substantially flat response from 50 to 5000 c.p.s.

SPECIFICATION

Output level: —55 db ref. 1 volt/dyne/cm².
Cable—approx. 4 ft. of co-axial supplied.
Weight—6 ozs. unpacked, 7 ozs. packed.
Dimensions—microphone only 2¼" x 2⅛" x ⅞"

TABLE AND STAND MICROPHONE

MIC 22

This omni-directional Microphone is robust in construction, with a pleasing appearance. Vibration, shock or low frequency wind noise will not affect the performance. The low frequency cut-off is dependent on the load resistance. The cut-off is given by the quotation, F = 80 ÷ R, where F = c.p.s., R = megohms. An adaptor (floor mounting) is available at low extra cost.

SPECIFICATION

Output level = —50 db ref. 1 volt/dyne/cm².
Output impedance—equivalent to approximately 0.002 uF. (0.8 megohm at 100 cycles).
Frequency response—substantially flat from 40 to 6000 c.p.s.
Recommended load resistance—not less than 1 megohm, dependent on low frequency response.

£9/18/6

LAPEL MICROPHONE

MIC 28

£5/19/6

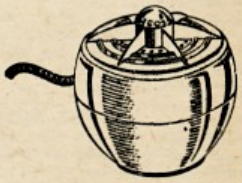
Designed to give freedom of movement, this Microphone is small and non-directional. Housed in a soft moulded rubber case, which gives protection against shock, it is provided with a pin at the rear of the case for pinning to the lapel.

SPECIFICATION

Output level—approx. —55 db ref. 1 volt/dyne/cm².
Recommended load resistance—5 megohms.
Frequency response—level throughout the whole of the audible spectrum.
Capacity—0.0015 uF. at 1000 c.p.s.
Impedance—100,000 ohms at 1000 c.p.s.
Cord—6 ft. shielded cable.
Size—1-9/16" wide x 2¼" long x ⅝" thick.

HAND OR DESK MICROPHONE

MIC 33



This Microphone has been designed for the high quality public address and home recording field. High sensitivity and flat characteristics are obtained by a specially designed acoustic filter. Housed in an attractive plastic case with an unexcelled response for its size and price. Unaffected by vibration, shock or low frequency wind noise. Omni-directional frequency response substantially flat from 30 to 7000 c.p.s.

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These inserts are available in varying sizes ranging from as small as 15/16" square to 1-13/16" round, with various thicknesses from 7/32" to 9/16". Suitable for every purpose such as hearing aids, public address, tape recording, amateur broadcasting, etc., they have responses from 2250 c.p.s. to 3500 c.p.s. at 5 db to 30 db. Insert can be supplied with or without 10 meg. resistor as required.

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very amusing as the going was pretty tough for the competitors who had to cope with a steep, slippery bank with the river at the bottom and a lot of very prickly box thorns. Some of the competitors took off their shoes and socks to attack it from the lower end by wading through the river. ('Tis said some bald heads suffered from contact with the thorns—Ed.) Laurie used a long wire for the antenna which was fed up into gum trees overhead. The gang finished off the outing by having a picnic tea together. It was decided to bring afternoon tea only to the next hunt and for the next few months during the winter.

SOUTH WESTERN ZONE CONVENTION

The South Western Zone Convention was held at Geelong over the week-end 30th April-1st May at the Geelong Radio Club Rooms, and was attended by more than 50 Amateurs and their friends, including the visitors Max 3BQ, Col 3FO, Athol 3CP, Brian 5ZAB (from Narracorte, S.A.), and Eric ZL3EQ, who is on a hitch hike around Australia. Peter 3APK was allowed out of hospital for the occasion, but had to return by 5 p.m.

Many of the visitors had portable radio gear on their cars and they were given directions by Geelong home based Amateurs.

The usual dinner was followed by a discussion of problems and the election of office-bearers. The new officers are as follows: President, 3AKR; Vice-Presidents: 3IC and 3ALG; Secretary, 3AEH.

A 2 mx tx hunt was won by 3ZAZ and the 80 mx scramble was shared by 3APB and 3AWZ. A visit was made to the Ceres Lookout, where some very good contacts with Melbourne and Ballarat stations on 2 mx were made. Signals were S9. 3LN gave a demonstration on the various ways that elements for 144 Mc. gave better results and how length of same affected the whole set-up, which was very interesting.

Mr. C. Gibson, Secretary of the Victorian Division of the W.I.A., acquainted members with the latest activities at headquarters.

On Sunday additional members attended, and a transmitter hunt on 80 mx within five miles of the post office, set cars radiating in many directions. The hunt was won by 3AGD, closely followed by Max Stock.

Members assembled for dinner in the Eastern Park Gardens, and enjoyed the surroundings of this idyllic spot. Prizes were distributed at the close of the afternoon.

The good attendance at the Convention was the result of hard work by Bob 3IC, assisted by 3BU and 3AWZ. All who attended went away pleased with their two days at Geelong.

NORTH EASTERN ZONE

Murray 3HZ and Les 3ALE have been doing the local work for the North Eastern Zone Convention, and by the time these notes appear we will have decided they did a very good job. Hugh 3AHF has been away on a spot of leave, but was back dealing with the Convention arrangements at time of writing. Howard 3YV has been working on 80 mx and Bruce 3QC is thinking of getting his rig on the air. Jim 3ALK has been on 2 mx on occasions, and Jack 3AKC was experimenting with aerials. Henry 3HP is about and Des 3BP is active, but Ron 3AQG is difficult to track.

Ken 3KR has not actually been worked lately; Lex 3AIL is thought to be away, while nothing has been heard of Vic 3ABX in recent weeks. Frank 3ZU has been helping Col 3WQ align the xtal stages of Col's Super-Pro. Syd 3CI was constructing a diode noise generator for v.h.f. work. Alan 3UI has been prominent lately on the 2 mx band. Keith 3JC must be sticking to the 20 mx DX, Stan 3AGT must be still painting his house. George 3GD has been heard on 80 mx, but nothing from Tom 3TS, Des 3CO, Chas. 3ACW, or Johnny 3ACK.

Of our Associates, Jim Harrington has been out of reach, and Jim Muntz is rather geographically isolated from Amateur Radio. However, it is understood that Clarry is still about, and Vern was in on the last A.O.C.P. exams.; we all certainly hope he had good luck. Two other enthusiasts, Les and John from Numurkah, went over to Tungamah one recent Sunday afternoon.

EASTERN ZONE

A new call is that of 3AJK, owned by Jack Sparks, who passed his A.O.C.P. recently. We hope this will inspire several other members to sit for the same exam. before long. Another new call is that of 3AAV who hails from VK2. Joe 3TO is still on 144 Mc., but comes down to the lower frequencies when b.c.i. permits. Ossie 3AHK claims to have worked a ZS on 7 Mc. and is awaiting the QSL.

Keith 3SS made a trip to Sydney recently and took along a portable rig and was heard here quite well. This same gentleman is in charge of arrangements for the Zone Convention to be held in Maffra in June, which we hope will be attended by as many as possible. So do not forget it chaps. David 3DY is interested in YLs at present, so Amateur Radio is very quiet in that direction. 3TY gets on the air on 40 and 80 mx when not playing around with the local b.c. tx. We are all still waiting for Alan 3AFA to put some of his gear on the air. How about it OM?

3FK's AR88 is still in VK5 so he is not on the air as yet. Not much is heard of the boys in the Warragul area. Maybe they do all their work on 2 mx. Well that is about all for now, so do not forget the Queen's Birthday week-end at Maffra fellows.

CENTRAL WESTERN ZONE

This month your scribe is 3ATR who is at present perishing with a 38 degree temperature in the shack. Bit hard to take after the tropics. Certainly envy the VK9 boys this morning throwing back the mosquito netting and stepping out of bed in a respectable temperature. Had quite a good trip though, visiting 4TN and 4KS in Brisbane, 9DB in Moresby and most of the Rabaul boys, 9BS, 9BW and 9RG. I would like to take this opportunity of thanking all the boys who extended hospitality to us. We made our only QSO with home from Bob 9BS' shack where we were able to copy 3ATN's feeble signal for an hour or so.

On the home front, activity is again on the up and up with the coming of the long winter months. Herb 3NN has decided to erect a 5 over 5 for 2 mx after a wind storm brought down his old beam. Merv 3AFO is also getting in business on 2 mx again. 3ATR still waging a three months' long battle to get an 80w. 2 mx rig going; works like a bomb when cold, but after an hour or so, grid drive gets lower and lower and lower till there isn't any.

GEELONG AMATEUR RADIO CLUB

The main activities over the past month have been concentrated on making the S.W. Zone Convention in this city a success. Most of the work was divided among members who worked diligently. Various members entertained club members over the last few weeks. Geoff Woods took all the club members on a pleasant cruise round the Bay on his yacht, made by himself. Bill 3AWZ entertained members in his shack. Bill 3BU gave an interesting talk on tape recorders, while Jim Barber discussed the integration of the Bush Fire Network, of which he is a member.

Everyone will be pleased to hear that 3APK is convalescing nicely and that he has his tx with him in hospital and is getting a large number of contacts. Our two new members to Amateur ranks, Ron 3AYB and Jim 3ZBR, are keen to get on the air and we should hear their dulcet tones soon.

A new feature introduced into the club this year has been the Sunday trips around Geelong. Members operated on numerous bands and some good contacts were made. This new activity has allowed the XYLs and harmonics to relax while the Amateur fraternity dissitates experiments and eats.

MOORABBIN RADIO CLUB

A new innovation at the club is the introduction of various games after the meeting, in the form of table tennis, card hockey, quoits, etc., and finishing up with a "cuppa." The annual Ladies' Night will be held on Friday, 3rd June, when all members' women folk will be the guests of the club. The evening will be a Film Night under the direction of Bob 3NZ.

The June meeting will be a Film Night, and Bob will screen some of the film he took whilst overseas. All welcome to come along. The club's tx is now operating OK. Don't forget the Club's Certificate. For this award, 14 members have to be contacted, and upon completion you will be made an Honorary Member of the Club.

The Club Rooms are open on the first Friday and the third Friday of each month. Club Rooms are located at the Moorabbin Town Hall, Nepean Highway, Moorabbin.

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QUEENSLAND

The display at the Queensland Industries Fair was an unqualified success despite the adverse receiving conditions.

Many enquiries re the W.I.A. membership and classes were received and in regard to the classes, Council has decided that as the VK2 Division has asked permission to operate in the VK4 territory, all enquiries have been forwarded to Ken 2AXZ owing to the fact that this Division is not at present conducting classes. Ken is conducting correspondence classes as advertised in "R. & H." and the cost of this advertising is being borne by the VK2 Division.

The election of Council for 1955-56 resulted as follows: VKs 4ZM, 4PR, 4NC, 4JF, 4YA, 4TN, 4VJ, 4AW, 4AB, 4JO, 4DG. Ex-officio members are 4FP, 4CC, 4FT, 4NJ and Miss Claire O'Brien.

The following trophies have been donated by Trade Houses for use by the Division in various Contests, etc: Edgar V. Hudson, a Toaster; B. Martin, Mike and Stand; G. O. Wills, open order for £5; Trackson Bros., Electric Clock; Irvine Radio, Mike Insert; A. E. Harrold, Mike and Stand; Chandlers Pty. Ltd., two 809s; A.G.E., two 5R4GYs; Mr. Fitzgibbon, of Racecourse Road, Ascot, £1/1/-. Our thanks for the generosity of these Firms and Individuals.

The broadcasts from the Queensland Industries Fair went out well. Contacts have been made with Ws, ZLs, and all VK areas. An outstanding incident was the call for help from Reids Dome for an injured man. A medical man in the audience gave immediate advice while the Police Rescue Service was contacted to arrange transport for the injured man to Springsure Hospital. The operators at the show were 4CC and 4FP. Once again the value of Amateur Radio in an emergency is proved.

A considerable number of requests have been received for information regarding the Library Service. 5/- deposit is required against the non-return of the books. The following books are available: "QST," "CQ," and "Break-In." Outward postage is paid by the Division, inward by you. The Librarian is John 4FP, 61 Liverpool Road, Clayfield, Brisbane. QSL Service (inward) is handled by Jack 4JF, Vanda Street, Buranda. QSL Service (outward) is handled by Miss Claire O'Brien, 93 Jardine Street, Stafford.

TOWNSVILLE AMATEUR RADIO CLUB

A meeting of the above club, held at the home of 4BX, was reasonably attended seeing it was the Thursday night preceding the long Easter week-end. Quite a number of apologies were received from members, who took the advantage of the long break from work and visited Magnetic Island and the various fishing spots.

The business of the meeting was quickly disposed of and members settled down to hear a very lengthy and interesting lecture on Direct Measuring Equipment by Mr. Parker, who was the lecturer for the night. He held the rapt attention of the members and time passed all too quickly. Time did not allow a visit to Castle Hill to inspect the D.M.E. there, but it was decided that two months from then an opportunity would be given to inspect same. The emergency gear and dummy antenna will be used to visually demonstrate the gear and then all the questions would be answered with practical demonstration, together with the accompanying diagrams. Some were heard to say that the time could not pass quick enough. The reason for the delay was that the May meeting had been set aside for a film evening.

Very little activity heard locally on the band, no doubt due to the three long week-ends in quick succession.—4RW.

SOUTH AUSTRALIA

Despite, and mainly because of, a certain VK3, I have returned to the fold and am in a position to state that the monthly general meeting of the VK5 Division, the Division that sets the pace, was held in the clubrooms to a somewhat smaller audience than usual. Just why the attendance should have been smaller is somewhat obscure, but as it was so close to the Easter break may have been one reason, although the apology received from Warwick 5PS for non-attendance may have been the real reason.

The meeting took the form of the well-known buy and sell night, and the reason for holding it so close to the last one of that nature was because the last three such nights had all been taken up with the disposal of deceased estates, with the consequent squeezing out of the members' gear. Council felt that it was only fair that an opportunity should be given to these members to dispose of their gear, and with this in view, the regular programme was deleted. The meeting opened at the usual hour of 8 p.m. and all the members stood silent for one minute in memory of Charlie Cheel (5CR) who had passed away a few days before.

Members were then asked to give some indication of the number of copies of the new call sign book that they would require, and then Jack 5JD read a copy of the proposed unified VK-ZL Contest rules which were unanimously voted as satisfactory. A letter of resignation from Charlie 5ON as operator of 5WI was read by the Chairman, and members, whilst regretting Charlie's inability to carry on, fully realised that responsibilities must come before hobbies. Gordon 5XU will carry on the job for the time being until Council fills the vacancy officially. A letter was received from Hughie 5BC, of Renmark, thanking all members for their enquiries and sympathy in his recent bad luck (his house was gutted by fire recently and he lost everything including his well known v.h.f. gear) and assuring them that his chin was still well up and that he was trying to get back on the air, but naturally it would be a long job, because first things must come first.

The Chairman then gave some interesting information regarding the transmissions from 4WI from the Brisbane Exhibition. He then thanked Harry Gilliard for the enlargement of the group at the picnic that he had presented to the Division, and with the announcement of the new members, to wit, J. Campbell (Associate), H. Green (Associate), and L. McGrath (5ZAG), the business side of the meeting came to an end, and the buy and sell commenced. Ross 5LW, who has been very QRL for some time now could not give Dougal 5BY a hand as auctioneer, and Norm Coltman rose to the occasion and helped to make the night the success that it was. The meeting closed at 11.30 p.m. with Pansy 5PS carrying on a bitter argument with Jim Paris as to the reason for Jim over-bidding by a shilling for a vernier dial! You'll be sorry!

Joe 5JO sent me along a lot of information on the visits of several VK3s to VK5 over the Easter period, and I was all set to go to town with this hot news when I saw that I had been beaten to the punch by another Divisional Scribe. Thanks anyway, Joe, give him a piece of your mind the next time that you contact him.

Tom 5TD is now back under his own roof after a long time. I understand that the repairs to the house are a great success, although if anyone mentions the word earthquake within ten yards of him he turns a sickly-shade of green.

SOUTH EAST AREAS

The monthly meeting of the South East boys was held on the last Thursday as usual, and took the form of a get-together and a ragchew followed by supper. This type of meeting seems to be the most popular among the radio boys no matter where it may be and it goes without saying that a good time was had by all.

5CH, who has been active mostly on the v.h.f's., broke his silence on Good Friday morning and was heard on 40 mx. Claude was using a re-built FS6 with a temporary antenna, and strangely enough I heard him in QSO with a VK5, and also heard him passing on his 73 to me. I called you Claude, but nothing doing; I think that you went back to a VK3 mobile. I was portable at Oakbank and did not hold out much hope of you hearing me, but better luck next time. 5CJ has been active on 40 and 2 mx keeping his skeds, and from what I heard Col., it would appear that work is progressing on the new shack. Regards to the family. 5ZAG is building a new antenna 4-4-4-4, and will soon have it erected. Leo has been in contact with Bram 5ZAB by landline and it would appear that a direct QSO will be the result. 5ZAB came on the air during the Easter period and his first QSO with 3HG was quite a thrill. Since this period many VK3s have been contacted on 2 mx, and also has been heard in VK2. Equipment includes 522 and converter to "740" rx.

5KU at the time of writing is on holidays and caravaning in VK3 and if all is to be believed, Erg and Joyce are having a wonderful time. The family are quite well again now. Nothing has been heard from the two Johns, although 5FD is a regular attendant at the monthly meetings and promises more interest in the active side of Amateur Radio in the near future. 5TW is keeping his schedules and is anxiously waiting for improvement in conditions so that he can work on his favourite band of 10 mx. 5MS has not been so active this month. Over Easter he altered his feedline to the well known beam from 300 ohm ribbon to co-ax cable and Gamma match, and on the Anzac week-end the conditions came good and a good time was had by all. Stuart worked several new countries, but is now at the state of finding them becoming scarcer and scarcer as his number increases.

Rumour has it that the three Chief Engineers from the three Commercial broadcasting stations in VK5, to wit, 5ad, 5ka and 5DN passed through Mount Gambier this month on their way to the I.R.E. Convention in VK3. Whilst I cannot believe that this is true, it is possible that the other two kidnapped my Chief and forced him to go along with them!!!

At the moment of writing Alan 5VO is in Victoria Ward at the Royal Adelaide Hospital recovering from a rather serious operation. He has been far from well, but if all is to be believed he is on the road to complete recovery. Glad to hear it Alan. Talking of illness, Charlie 3BH paid a visit to the city of culture just before Easter, and was so taken up with VK5 that he collapsed at the railway station from the shock of realising just what a fast moving and dashing State it really is. That's my story anyway, and I am sticking to it, Pincott or no Pincott. Sorry that I was leaving on my vacation the day that you rang me Charlie, I would have liked to have met you personally. Take care of yourself OM.

The VK5 v.h.f. notes are now being written by 5MT owing to the fact that 5XU is QRL with quite a lot of Institute matters. I think that this new scribe will do a good job, in fact I am well on his side, the reason being that when he wrote the first v.h.f. notes he addressed them to me and called me Dear Sir, which is a little more respectful than the last v.h.f. scribe used to address me. There should be more of it! The Short Wave Listeners' Group in VK5 is coming along nicely under the guidance of Jim Paris. I believe that a scribe will soon be appointed and then full details of their doings will be available for all to read, possibly this will mean another letter addressed to Dear Sir. Goody, goody!

NORTHERN AREAS

5AP has shifted his QTH to Port Pirie and has been heard putting out a real f.b. signal on 80 mx from there. Ron has had a very busy time getting the place ship-shape pending the arrival of the XYL. Thanks for the contact on 80 mx Ron. Hope to see you again soon. 5CO has at last put a signal on the air after an absence of over two years from the air. It has been a matter of building before DX for Brian, although plans for a new 100w. tx are well advanced and the 40 ft. tower is already erected for the 20 mx beam. 5EN has only recently taken on the status of a married man and hopes to win the XYL over to Amateur Radio. Ern has made a few appearances on 80 mx, in fact I heard him in contact with Doc one night shortly before he was married. The mobile gear is out of action at present, but would assume that this state of affairs is purely temporary. Ex 5OD, who is now in Albany, Oregon, U.S.A., recently wrote a letter to Ern and in the letter were good wishes from a number of W7s of the Albany Radio Club. Bob said that he was enjoying his stay in W land although he is on the move all the time. He hopes to work into VK through W7SO shortly.

5WG has been in hospital recently and we all hope that Wally is now OK. Will be looking for your signal OM. 5BG is still putting out a good signal on 80 mx and Bob has collected some good picture slides of his wanderings around the North. Was pleased to contact you on 80 mx Bob, and tell your XYL that if I can get a tape recorder, I will be able to put your duo patter act on 80 mx on to tape, and make my fortune. No kidding! 5UW has been heard from Port Augusta on 80 mx, although Keith has had a little modulation trouble, but hopes to put his finger on the cause ere long.

5RI is active on 80 and 20 mx. Enjoyed our contact on 80 mx Bob, and I haven't let my typewriter run away with me, have I? Your warning to cancel your membership, if I did, put the wind up me! 5DA puts in a few appearances on 20 mx mainly, although I heard Roy in contact with 5AP and 5BG on 80 mx one night. "Roop" 7RM was asking about you the last time that we contacted on 40 mx. 5KS made a visit to his old home town of Port Pirie for the Easter week-end and was heard from the shack of 5EN. Has the old place changed much Ron? 5VM is a very busy man these days. 5CY is often heard on 80 mx in the early part of the evenings, and that is a real good signal Col. Hope to contact you some evening, but we city slickers have to watch b.c.i.! 5WO is fairly active on 15, 20 and 80 mx and has just completed a three el. beam for 15 mx which he hopes to have erected in the next few weeks. Many thanks for the news Austin, and here's hoping that you can find time to send me some more. You see fellows, if I get a lead I can do the right thing by you all, but no news is bad news for me.

No news or signals from Lance 5XL, John 5FB, Cam 5XR, Mac 5CE, Jim 5JY, and Jack 5LH. what about it gang, come out, come out, wherever you are!

Rumour is rife in VK5 that a certain dark horse has made an unexpected entry into the recent Field Day Contest. I cannot give all the details of this dark horse, mainly because he is one of those modest retiring types and has to be forced to discuss any of his activities. This I can say, he is well built and muscular, has that type of Grecian beauty that is so unusual in the average male, is educated above the normal, and dresses in that carefree style which is associated with pots and pots of money. As I said before, I cannot tell you any more about him, he probably is covered in confusion as he reads these notes, but this I can say, he is known in some quarters as the "Shrinking Violet." Now I must not tell any more or you will all guess who it is. Incidentally, the Contest Committee have threatened to disqualify him on sight, the nasty things!!

In closing these notes for this month, might I be permitted to draw your attention to the boloney that went on in last month's notes between Pro 5PS and Pincott. "Palsy-walsy Pincott" and "Pinny," etc. Personally they both give me a pain in the "Pinny." Whilst I was away last month I dashed off a technical article on the skin effect of the crossmodulated back wave with respect to the inverse ratio of the feedback along the transverse angle of eliptical gobbledeadook. I let the fellow in the next room to me read it and he thought it was jolly good. I will admit that he found it a bit difficult to read in one piece, mainly because his strait-jacket was a little tight. I did intend to send it to the magazine, but when I saw the name of the new Technical Editor on the front page of the magazine this month I gave the idea away. What would he know about my genius?

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TASMANIA

After much pondering and calendar perusing I have at last worked out how I come to be in possession of notes on two general meetings, instead of the customary one. I am afraid that the annual general meeting and Dinner held in March completely took my attention off the fact that the April general meeting notes should also have been incorporated in that issue. Hence, reference to two meetings, rather than the alternative of a two-months' time lag.

The general meeting for April was held in the club rooms with a representative gathering

VALE CHARLIE CHEEL (VK5CR)

Members of the VK5 Division, and Amateur circles generally, heard with feelings of deep regret of the passing of Charlie Cheel (VK5CR) last month. Licensed approximately in 1927, he was active on 200 metres when Amateurs entertained listeners on Sunday mornings with music, both canned and live. He was a Council member of the VK5 Division in the 1930s and was a Past President of the old Western Suburban Radio Club early in its history.

Up to the time of his death, Charlie was active on 40 and 6 mx, 144 and 288 Mc., and was one of the few "Old Timers" who kept up with the many trends of Amateur Radio in VK5. He was a cinematograph operator in the early days of the art, as far back as the days when limelight was the medium of light projection, and was both a professional and amateur photographer, especially in the field of color. Carrying his age remarkably well, few will be aware that he was 65 years at the time of his death.

Charlie was a perfect example of how to keep young through a hobby, and to his widow, two sons and two daughters, we extend our sincere sympathy, and regret sincerely the passing of our fellow member.

of members present, and presided over by Mr. F. J. Evans. After the business side of the meeting was over, Mr. L. Edwards (7LE) was persuaded to give a lecture on a subject dear to the hearts of quite a few these days, namely, 144 Mc. Direction Finding, and its associated equipment.

The May general meeting was presided over by Mr. J. Brown (7BJ) in the absence of the President, and about 30 members were in attendance. Doctor Kelly (7LL) gave a most interesting lecture on "The effects of electricity on the Human Body," and was most suitably supported by a demonstration of the new method of artificial respiration by Mr. Bishop of the St. John Ambulance. Doctor Kelly also brought in a "small ships" tx for inspection. The meeting also discussed and inaugurated a "Social Activities Fund" to cover prizes, and other field day expenses, etc. A "Fob-fumble" produced a most gratifying return.

Two metre activity with a field day accent seems to warrant a special mention this month. Associate John Grace has re-built his super-regen. incorporating all mod-cons., and when last seen was complaining that the darn thing would do everything but super-regen. 7FM has reached about Mark 15 on his rx, but perhaps my informant may have exaggerated a little there. This 2 mx bug is a wily creature, with far reaching nippers, and he soon found a part of the 7LS anatomy exposed. With the aid of visitors 7LE and 7ML, Len now has a 2 mx tx under way and (according to rumour) is looking for a convenient Hydro-pole to mount his antenna on. Max 7ML has crystal controlled 7193s under construction also, so soon I shall feel obliged to go out and give my 815 a kick in the anodes and see if I can't join in. Whilst writing the foregoing I have been wondering whether there is any connection between field days and the ancient Egyptian era. Doubtless you have all seen illustrations of frescos of that period, and have noted the characteristic pose that the figures often take—one arm straight out forward, forearm vertical and palm horizontal; the other arm held aft and more or less reversed. Well, imagine a portable beam held in one hand and the rx in the other, and see if it does not strike a very familiar note.

I was surprised to find out that Athol 7AJ was in hospital and had undergone an operation. Athol's XYL advised me that he was expected home on 7th May, so we all wish you a speedy recovery, Athol, and trust that ere this appears in print, you are well on the way to good health again.

Ted 7FJ is at present engaged in a tense struggle with a xtal noise generator and new rx, whilst 7RT has decided that his freq. meter is worth keeping after all. I quite agree with you, Ray—dial ball races should be seen and not heard. I don't know whether there is a good market for keys these days, but Doug. 7DW was definitely heard on phone. Of course there could be some other reason. Secretary Bill Tait is looking forward to long periods of touching-typing morse—did I hear you chuckle Bill? Ah well, I guess you know what's best.

Well that's about it for this month chaps. Before sealing the envelope I would like to make an urgent plea for news. Believe you me, it's not easy to get. I would be delighted to hear from any member on his activities and perhaps some of the more out-lying members could even be induced to drop me a line. Anyway, here's hoping.

NORTHERN ZONE

For our April meeting we made a change to Thursday nights and judging by the very good attendance, the change was worthwhile. 7GM showed his new 2 mx converter, whilst Percy Woodrofe displayed his 2 mx personal portable rx. 7LZ described some of his doings with the v.h.f. VK3 gang.

From Queenstown, where no one goes to bed before 5 a.m., 7BR has been having a holiday in Launceston. The resultant somnolent appearance of many in this zone was not due to staying up all hours listening for DX. Many of our old timers roared with glee when they saw the screed in the Melbourne "Herald" re ex-7CR. Yes, we enjoyed it Vi, hope Chas did.

Plenty of ZLs could be heard in mid April up to about 9 p.m. on 80 mx, but most of the other bands appeared to be very poor. 7LX has deserted the wholesale business and joined D.C.A. with 7PF. Max 7CA is still visiting far off places, coming home once in a while, so we haven't heard him on 40 mx lately. Believe 7BQ has a new 2 mx converter under way, whilst Henry Solomon is awaiting results of the exam. Ed Bonis still waiting for his gear from G-land, whilst Jim Wells is off to Brighton for his National Service. 7RB has been very quiet for some time, whilst it is reported that 7RK has almost forgotten his code. 7XW off to VK3, "the land of promise" in May for holidays.

PAPUA—NEW GUINEA

During one of the Sunday morning hook-ups, 9RM made the remark that he thought we may be able to do something to assist the younger generation in furthering and fostering their interest in Amateur Radio. He had in mind a Junior Club in Wau, where no facilities exist for helping these lads on their way to Hamdom, and eventual membership of the W.I.A. Within ten minutes of this casual remark to 9FN in Moresby, the response began in the shape of equipment, not from the Amateurs themselves, but from interested listeners who apparently make it a habit, of listening to these Sunday morning hook-ups. Frank's phone we understand was ringing for hours afterwards and it seems that enough equipment is now in the process of being packed and despatched to Wau to start the club in the right direction. It appears, too, that an anonymous donor also will stand the cost of air freighting the gear over to Wau, which is over the side of the Owen Stanley Ranges from Port Moresby.

Peter 9RM now has all the gear necessary to start the club, but no club, and no members. Quite a reversal of form, as usually it is the other way round. However, a meeting of parents was called whose youngsters are interested in radio and this, only a week from his original suggestion! Nine parents and their off-springs attended and so the club was formed. One of the parents kindly made available a suitable clubroom with free power, and since the inaugural meeting further donations of wooden forms, blackboards, have been made. Peter 9RM and Ron 9RC will carry out the duties of instructors to these keen lads. No fewer than 18 members belong to the "Wau Amateur Radio Club," as it is now called.

Our worthy Secretary, Doug 9OQ, advises that the membership of the VK9 Division now stands at 31 full members and 7 associate members. Steadily growing. Seems that the VK9 boys are already planning their R.D. Contest programme. Doug 9DB has an all-band switched exciter driving an 813 final. Frank 9FN has push-button control of tx's on five of the most useful bands, with dual transmission and reception facilities. Doug 9OQ has a new 813 pi-coupled final coming up for c.w. operation. Associate member, Johnnie Toland, is building 100w. push-pull 807 rig in preparation for the time his A.O.C.P. is adorning the shack wall. Good luck Johnnie. Charles 9CR, transferred to Madang, expects to have new rig working soon. Don 9DS is on leave.

Trevor 9TC is QRL, but hopes to put a rig on the air sometime this year. Roy 9AU very active on 7 and 14 Mc., and working his share of DX. Has just built a small portable rig, 10w., and three-valve rx of a type popular pre-war. Plans to use it for emergency rig and as a companion during his leave in October.

Conditions in Wewak consistently good on 14 Mc. for Europeans and Middle East. U.S.A. and Asia on 7 Mc., not to mention 3.5 Mc. where VK2 and ZLs have been coming through. 21 Mc. has been performing well to South Africa and Middle East, but Roy's rig doesn't work on this band as yet. Rectify that before the R.D. Contest Roy. Ron 9RG going on leave shortly. Hopes to bring back an all-band rig on his return from Australia.

Bill 9WP still uses 4w. and working DX too. Bob 9BS building a rotary beam for 14 and 21 Mc. John 9KT going on leave soon and expects to bring back a brand new rx. George 9GV and 9EB heard on a recent Sunday hook-up. Doug 9DT still working down Samarai way. Charles 9CS holidaying in Wau at the time of writing. Ron 9RC now has new xtal mike. Peter 9RM still very active in between times, when he hasn't got some of the youngsters learning their ABC of Amateur Radio. Bill 9BW still awaiting the arrival of a v.f.o. from Australia. Using a xtal for c.w. work mainly. Expects to be on phone again soon.

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CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

MEMBERSHIP OF W.I.A.

Editor "A.R.," Dear Sir,

Some time ago, a new class of Amateur license was introduced by the P.M.G. Department, to cater for a large number of enthusiasts who were unable to pass the morse test of the A.O.C.P. Under the terms of this license, they were allotted special call signs and permitted to operate on frequencies in the 144 Mc. band and higher. To encourage these Amateurs to fully qualify for the A.O.C.P. by passing the morse test in their own time, they were admitted as Associate Members of the Western Australian Division of the W.I.A. Under the terms of our Constitution, they were unable to join as full members, nor were they eligible to stand for Council.

It is now learnt, that it is proposed by certain members of the W.I.A. that our Constitution be altered to enable these Associate Members to enjoy the privileges of full membership. Before members agree to this proposal, I feel the following facts should be presented to them:

1. The Limited Class of license does not permit operation in the 3.5, 7, 14, 21, 28 or 50 Mc. bands, and should this class of member become a member of the Council, he could not represent the members operating on these bands. He would not appreciate the problems and difficulties associated with these bands, for he is not qualified by the P.M.G. Department to operate there. Nor is it likely that his heart would be in any fight to deny these bands to commercial interests or strive for their retention by Amateurs for the same reason.

2. In the period since this type of license has been in operation, 11 such VK6 licenses have been issued by the P.M.G. Department. During the same period only five unrestricted licenses have been issued in Western Australia, It is obvious that before long the number of holders of restricted licenses will outnumber the holders of unrestricted licenses. In the event of the Constitution being altered to make them eligible for this office, it is only logical to assume that the majority of members of Council will consist of this class of licenses.

3. It may be argued that the holders of restricted licenses in many cases are better qualified technically than many holders of unrestricted licenses, that morse is becoming redundant, or that these members would be an asset to a Division. All this may be true, but until the day the P.M.G. Department permits the holders of these licenses to operate on any and every band at present permitted to us, they cannot be said to fully represent Amateur Radio.

The frightening prospect faces us, that it would be possible for Federal Executive itself to consist solely of restricted licensees, totally uninterested in frequencies below 144 Mc., and coldly indifferent to the fate of bands which are the mainstay of Amateur Radio.

—TOM MULDER, VK6MK.

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